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Giant-Screen Biz Meets Themed Entertainment...and They Get Along Just Fine!

by Paul Fraser

There was a time when the only major media-based experience at most museums or science centers was a film in a giant-screen theater. Today, most museums, including those with GS theaters, have embraced lots of media throughout their buildings. And GS filmmakers, in their quest for revenue to help pay for their productions, and to extend their stories, have re-purposed and licensed their content for a myriad of non-GS theatrical uses.

My visit to the enormous trade show of the **International Association of Amusement Parks and Attractions** in Orlando last November got me thinking about what the GS industry can take away from the latest developments in media-based attractions found in the themed entertainment industry, and about what the GS industry has already learned.

Museums with giant screens have not been standing still. Several have recently added other media experiences, and in my consulting practice I've even heard a few museum CEOs wonder aloud, "What new ideas for media-based attractions could potentially replace our GS theater?"

At least one U.S. museum is poised to do just that. As *LF Examiner* reported last year (*see Shorts, November 2017*), Connecticut's **Maritime Aquarium at Norwalk** is planning to build a 4D theater that would replace its 30-year-old IMAX theater. The IMAX will be razed late this year so that the Connecticut Department of Transportation can replace an old but very active railway bridge next to the building. Although no announcement has yet been made about which 4D system will be selected, the new facility is slated to open in 2019.

Motion simulators

Atlanta-based **Pulseworks** has been in the business of supplying motion simulators to museums, science centers, and aquariums for 20 years. The company's business model is based on supplying turnkey systems on a revenue-share basis, with no upfront cost to the venue. In 2016 it deployed its first VR-enhanced simulator, branded the "VR Transporter," at the **National Museum of the U.S. Air Force** in Dayton, OH, which also has a GS theater.

Pulseworks has since supplied VR Transporters to the **Smithsonian's National Air and Space Museum**, the **Denver Museum of Nature and Science**, and the **Saint Louis Science Center**. **Jackie Mollet**, managing director of visitor services for the Saint Louis Science Center, is pleased with how the VR Transporter has added to the center's business, saying it has "increased our overall sales and had a positive impact on visitor satisfaction. As a free-entry science center, we are always looking for incremental ways to diversify revenues and increase per-cap, and the VR has done that for us." Pulseworks' CEO **Raj Deshpande** adds, "this upsell also works for institutions with a paid admission."

The system comes with VR content produced by Pulseworks. The first two educational shows, each with running times of about six minutes, are *Spacewalk* and *Dive in Prehistoric Seas*. More VR content on natural history and physical science subjects is in the pipeline. The four-seat VR Transporter occupies a small footprint of about 15 feet (4.6 meters) square, and requires clear height of no more than 10 feet (3 meters). (Additional space may be needed for ticketing and queuing). The first few units were enclosed cabins, but Pulseworks has concluded the enclosure is not actually necessary, and has deployed "enclosure-less" systems, too.

Could some or all of a GS theater's seats be converted to support a VR Transporter experience? Deshpande admits "it could be done," and his company is "exploring some ideas, [but] the technology is not there yet. We are scaling to 8, 16, 20, and larger seat deployments, but a full GS theater would need something different," probably an array of many small motion platforms.

What about the cross-media opportunity: working with a GS producer to capture

*(see **MEDIA** on page 6)*

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Premiering This Month

Fifty Shades Freed
Black Panther
America's Musical Journey
Mountain Quest

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GSCA Film Expo Preview

The **Giant Screen Cinema Association** will hold a two-day Film Expo in Seattle, WA, March 12–13. The meeting will feature screenings of 14 new films (five of which are rough or fine cuts of not completely finished shows), and presentations on 12 films in production and 14 films in development.

The new films, and their production companies, are:

*Amazon Adventure** ..... SK Films, Inc.
*America's Musical Journey** ..... MacGillivray Freeman Films, Inc.
*Australia: Life in the Wild*** ..... Wild Pacific Media
*Backyard Wilderness** ..... Archipelago Films
*Conquest of the Skies** ..... Colossus Productions
*Great Barrier Reef*** ..... December Media
*In Saturn's Rings*** ..... SV2 Studios
*Mountain Quest*** ..... Stranger Than Fiction Films
Oceans: Our Blue Planet ..... BBC Earth
Pandas ..... Imax Corporation
*Planet Power** ..... N3D Land Films
The Story of Earth ..... December Media
*Volcanoes*** ..... Digital Crossing Productions
*We, The Marines** ..... MacGillivray Freeman Films, Inc.

* Shown as new film at previous conference
** Rough or fine cuts

The expo will be hosted by the **Pacific Science Center**, whose Boeing IMAX Theater will present all screenings. The conference hotel is the Seattle Westin, which is less than a mile from the science center. For more information and to register, visit giantscreencinema.com.

Sunday, March 11: Pre-Expo Day

Time	*Event*	*Location*
All Day	Rehearsals	PSC
8:00 am	24-hour rule begins	
8:00 am - 6:00 pm	Registration and Information	Westin
9:00 am - 11:30 am	GSCA Board Meeting	Westin
12:00 pm - 1:30 pm	Committee Meetings:	Westin
	- Technical	
	- Industry Development	
2:00 pm - 3:30 pm	Committee Meetings:	Westin
	- Event Planning	
	- Member Services	
4:00 pm - 5:00 pm	Distributors Interest Group Meeting*	Westin
5:30 pm - 7:00 pm	Opening Reception	Westin: Fifth Avenue Rm

Monday, March 12: Film Expo Day 1

Time	*Event*	*Location*
8:00 am	Walk or take Monorail to theater	
8:30 am - 5:00 pm	Registration and Information	PSC
8:30 am - 8:45 am	Welcome	PSC
8:45 am - 9:30 am	Film 1: ***Great Barrier Reef***	PSC
9:30 am - 10:15 am	Film 2: ***Pandas***	PSC
10:15 am - 10:30 am	Break	PSC
10:30 am - 11:15 am	Film 3: ***America's Musical Journey***	PSC
11:15 am - 11:50 am	Projects in Development	PSC
11:50 am - 12:00 pm	Trailers	PSC
12:00 pm - 1:15 pm	Lunch on your own	
1:15 pm - 3:15 pm	Films in Production Session	PSC
3:15 pm - 3:30 pm	Break	
3:30 pm - 4:15 pm	Film 4: ***Planet Power***	PSC
4:15 pm - 5:00 pm	Film 5: ***Amazon Adventure***	PSC
5:00 pm - 5:45 pm	Film 6: ***Oceans: Our Blue Planet***	PSC
5:45 pm - 7:15 pm	*Oceans: Our Blue Planet* Reception	PSC
Ackerley Family Exhibit Gallery		
7:15 pm	Dinner on your own	

Tuesday, March 13: Film Expo Day 2

Time	*Event*	*Location*
7:30 am - 9:30 am	Registration and Information	Westin
8:00 am - 9:15 am	GSCA Member Meeting and Breakfast	Westin
9:15 am	Walk or take Monorail to theater	
10:00 am - 5:30 pm	Registration and Information	PSC
10:00 am - 10:45 am	Film 7: ***Backyard Wilderness***	PSC
10:45 am - 11:30 am	Film 8: ***The Story of Earth***	PSC
11:30 am - 12:15 pm	Film 9: ***Conquest of the Skies 3D***	PSC
12:15 pm - 2:00 pm	Lunch on your own	
2:00 pm - 2:45 pm	Film 10: ***In Saturn's Rings***	PSC
2:45 pm - 3:30 pm	Film 11: ***We, The Marines***	PSC
3:30 pm - 3:45 pm	Break	
3:45 pm - 4:30 pm	Film 12: ***Australia: Life in the Wild***	PSC
4:30 pm - 5:15 pm	Film 13: ***Mountain Quest***	PSC
5:15 pm - 6:00 pm	Film 14: ***Volcanoes***	PSC
6:00 pm	Travel to hotel	
6:30 pm - 7:30 pm	GSCA Board Meeting	Westin
	Dinner on your own	

*Private meeting, by invitation only.

The Pacific Science Center's Boeing IMAX Theater.

The First Giant-Screen Dome Theater: Seattle 1962

by Diane Carlson

Attendees who arrive a few days early for the **Giant Screen Cinema Association**'s Film Expo in Seattle, March 12–13, will have the opportunity to step into dome theater history. **Pacific Science Center**'s Laser Dome theater was originally built as a 70mm film dome more than a decade before the world's first IMAX Dome theater. If you are in Seattle the weekend before the Expo, March 10–11, you can see one of our current live laser shows.

The original structures that now house Pacific Science Center were built as the United States Science Pavilion for the 1962 world's fair, officially known as the **Century 21 Exposition**. Against the backdrop of the Russian launch of Sputnik in 1957, the theme of the U.S. Pavilion was science and technology. The U.S. Department of Defense and National Science Foundation wanted to use the fair to awaken the general public to the importance of science. The planning team decided to produce a unique film and theater that would take the audience into space.

The revolutionary idea was to have a totally immersive experience. Lenses, camera, and a projector had to be designed and built specially for the project. The **Boeing Airplane Company** was brought in to support the project, the primary contractor for designing the film system and theater was the **Cinerama Company**, and the film was produced by **Fine Arts Productions**. The resulting ten-minute space spectacle, entitled ***Journey to the Stars***, was the very first immersive large-format film presented on a dome. Advertising materials at the time made a point of noting that the film was *in color*.

Visitors to the pavilion began their visit with the **Charles** and **Ray Eames** film, *The House of Science*, which set the context for the exhibits to come. (In 1979 that entry theater was converted to an IMAX auditorium that is now known as the PACCAR IMAX Theater.)

But it was the pavilion's second theater that became one of the most popular attractions at the fair: the Boeing Spacearium. The 360-degree 70mm film image was projected onto a 79-foot (24-meter) tilted dome, designed by **Buckminster Fuller**. With a surface area of 8,000 square feet (750 square meters), it was touted as the largest motion picture screen in the world. The theater accommodated about 750 standing guests per show, four shows per hour. There were no seats, only railings for people to hold on to.

Journey to the Stars was a hit: in six months, over 4.5 million visitors visited the Boeing Spacearium to take the simulated two-billion light-year journey.

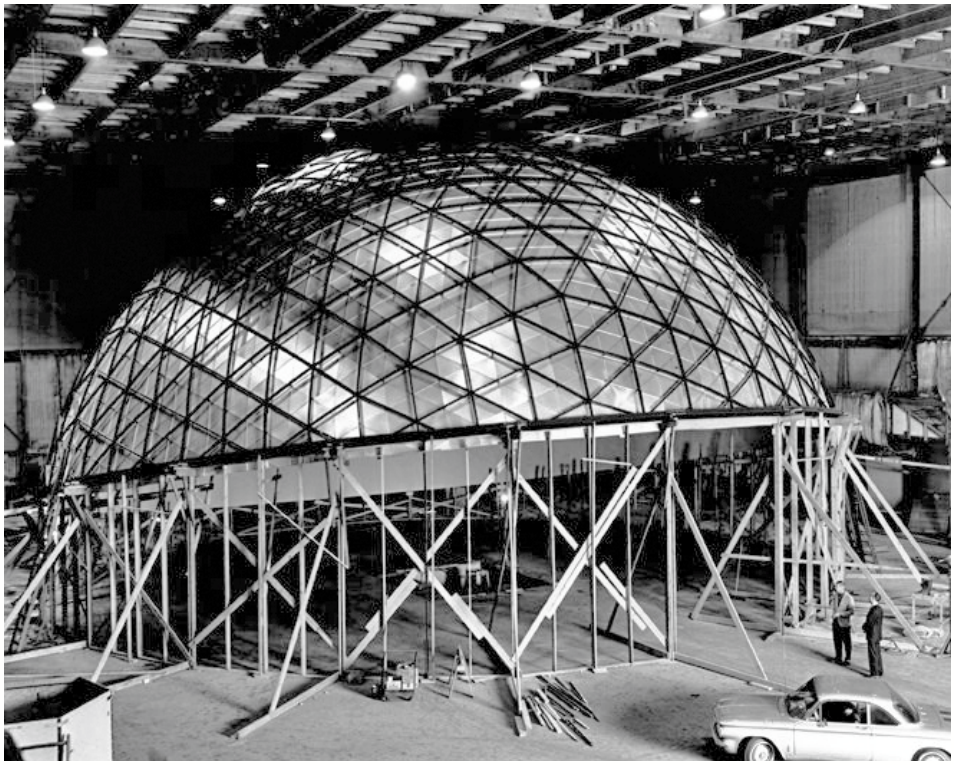
(Eleven years later, in 1973, the first IMAX Dome theater opened in San Diego, CA at the **Reuben H. Fleet Science Center**. One of its first films was ***Voyage to the Outer Planets***, produced **Lester Novros** and **George Casey**, of **Graphic Films**.)

The original aluminum dome, weighing eight tons, was designated a City of Seattle Landmark in 2010 along with the renovated PACCAR IMAX Theater. Laser shows started in the dome in 1979, and have run continuously since then, originally provided by by **Laserium**, with **Laser Fantasy** taking over in the early 1980s, and installing new solid state laser technology in the last few years. The longest playing show has been, *Laser Floyd: Dark Side of the Moon* but live bands and shows like *Laser Stranger Things* and *Laser Beyonce* keep it contemporary.

For additional technical details about the Boeing Spacearium, see the article on *Journey to the Stars* in *American Cinematographer*, June 1963, reprinted at www.in70mm.com.

For more information about the GSCA's Film Expo, visit giantscreencinema.com. For Pacific Science Center's Laser Dome schedule, visit https://www.pacificsciencecenter.org/laser-dome/

Diane Carlson, principal of Giant Screen Cinema Consulting, has lived in Seattle for 37 years, and worked at Pacific Science Center for over 35 years. She can be reached at dianecarlsongscc@gmail.com.



The Spacearium dome under construction at the United States Science Pavilion at the 1962 World's Fair.

Cosmic to distribute Nat Geo titles

Cosmic Picture has launched a giant-screen distribution branch and has acquired both the staff and theatrical distribution rights to films previously distributed by **National Geographic Cinema Ventures**. The new company, **Cosmic Picture Distribution, LLC,** will sub-distribute 17 Nat Geo titles to giant-screen theaters, including ***Sea Monsters*** (2007), ***Extreme Weather*** (2016), and Cosmic's own 2013 film, ***Jerusalem***. The company will also distribute Cosmic Picture's ***SuperPower Dogs*** and ***Einstein's Incredible Universe***, currently in production for release in 2019 and 2020, respectively.

The new distribution organization will be run by Nat Geo's three former distribution staffers: **Antonietta Monteleone** is Cosmic's new president of film distribution, **John Wickstrom** is vice president, and **Melissa Rogers** is senior distribution coordinator. (*See also item below.*)

According to Cosmic co-founder, **George Duffield**, the deal was less than a year in the making. He and fellow Cosmic principals **Daniel Ferguson** and **Taran Davies** wanted to distribute their own films, but "the math doesn't add up" for a new company with only one or two titles. Cosmic had a very good relationship with Nat Geo as distributor of *Jerusalem*, so when Duffield and his partners learned last year that the Nat Geo library was going to become available, they made the deal for both the films and the staff.

Cosmic plans to release two or three new films a year, and is actively seeking new projects to distribute, according to Duffield, who tells *LF Examiner* that they "have already made some progress on that front."

Omaha Zoo drops IMAX for D3D

The **Lozier IMAX Theater** at the **Henry Doorly Zoo** in Omaha, NE, closed on Jan. 15 for a ten-week conversion and renovation, replacing its 21-year-old IMAX 3D 15/70 film projector with a Christie 4K 3D digital projection system installed by **D3D Cinema**. In addition to the new projector, the theater will get a **QSC** 5.1-channel sound system and a new screen from **MDI**. The new screen will be 41x75 feet (12.5x23 meters), down from the original dimensions of 61x84 feet (18.6x25.6 meters). According to D3D's **Derek Threinen**, the main reason for the narrower screen is that the throw from the booth to the screen is unusually short, and custom lenses would have been significantly more expensive.

During the closure, new seats, flooring, and LED lighting will be installed. The new seats will not change the seat count of 364. The estimated cost of the renovation is about $1.1 million.

When it reopens on May 30, the theater will be renamed the **Lozier Giant Screen Theater**.

Imax deals in Turkey, Ecuador

Imax Corporation has announced new multiplex theater deals in Ecuador and Turkey. In Ecuador, the **Supercines** chain will add five new IMAX theaters to the two it currently operates in Guayaquil and Quito. Three of the new theaters will be located in Guayaquil, one in Ambato, and another in Machala. Supercines is the largest theater chain in the country, with 22 locations.

In Turkey, the **CJ CGV** chain, based in South Korea, will add four new IMAX theaters to new and existing multiplexes operated by its **Mars Entertainment Group** subsidiary. Locations were not disclosed. The current deal brings CJ CGV's total IMAX commitment to 133. The company operates over 3,300 screens in 445 locations in South Korea, China, Vietnam, Indonesia, Myanmar, Turkey, and the U.S.

The Henry Doorly Zoo in Omaha, NE, is replacing its GS theater's seats, carpets, and screen, and switching to digital.

Photo by Andrea Hennings, Omaha Zoo.

Microsoft to sponsor *Oceans*

BBC Earth and **Giant**

Screen Films have announced that **Microsoft** will be the "exclusive technology sponsor" for ***Oceans: Our Blue Planet***, a new giant-screen film that will premiere on March 16. Microsoft will partner with BBC Worldwide Learning, the commercial arm that creates educational content, to create "content and activities [that] will be tailored around the messages and themes portrayed" in the film, according to a press release. The programs, which will cover "a range of STEM subject areas," will be promoted in giant-screen theaters across the U.S.

China GS plans to beat Imax

The state-backed **China Film Digital Giant Screen** (CGS), is planning to overtake **Imax Corporation** as the leading premium large format cinema brand in China. In an interview in December, CGS chairman **Lin Minjie** said that "We have a government mandate to become the largest premium large format brand in China's film market and we are confident to achieve that target in 2019. Our top priority is expansion, not profitability."

In 2012, its first year, CGS opened 13 theaters in China, compared to Imax's 98; as of last summer there were 288 CGS houses and 430 IMAX screens. CGS offers a wider range of programming than Imax, which is subject to government imposed limitations on the number and type of films that can be shown in IMAX theaters. CGS charges exhibitors a flat fee for access to its technology, unlike Imax, which requires theaters to share box office.

In 2013, Imax sued **GDC Technology**, a subsidiary of the state-owned **China Film Company**, and a former Imax employee in U.S., Canadian, and Chinese courts. The company alleged, among other things, that GDC had stolen technology that allows images from two digital projectors to be "superimposed to a sub-pixel resolution," a key element of the IMAX digital projection system that GDC then used in the CGS system. Imax dropped the U.S. complaint, and it is believed that the company settled the Chinese suit, although that has not been confirmed nor any details disclosed. (*See Biz, February 2014.*)

Lutz joins Evans & Sutherland

Mike Lutz has been named vice president of new business development by **Evans & Sutherland**, a leading supplier of digital planetarium systems. In the newly created position that reports directly to CEO **Jon Shaw**, Lutz "will focus on new possibilities for technology and programming beyond the company's current immersive-theater specialty." He tells *LFX* that he will not be directly involved with the company's existing fulldome and giant-screen product lines, but will be looking at new markets and new technologies for E&S to explore. That said, he will continue to serve on the board of the **Giant Screen Cinema Association** for the remaining year of his term, and will attend its Film Expo and fall conference.

Mike Lutz

He and his wife have relocated from Southern California to E&S' home town of Salt Lake City, UT.

Lutz comes to E&S from **Imax Corporation**, where he was VP of institutional sales from 2011 to 2017. Before that he was president of distribution and SVP for business development at **MacGillivray Freeman Films** for 14 years. For eight years before that he was VP of theater operations for **Laser Fantasy**.

Lutz holds a Bachelor's in communications from Lewis and Clark College in Portland, OR.

Monteleone, Wickstrom, and Rogers found Cosmic Distribution

As reported above, the distribution staff of **National Geographic Cinema Ventures** have moved en masse to form **Cosmic Picture Distribution**, which will distribute 17 former Nat Geo titles, new productions by parent company **Cosmic Picture**, and third-party acquisitions.

Antonietta Monteleone is Cosmic's president of film distribution. She was vice president of film distribution at Nat Geo for 12 years, and before that manager of distribution for **nWave Pictures** for five years. She studied business management at Pace University in New York.

Antonietta Monteleone

John Wickstrom is vice president of film distribution at Cosmic, after having served as director of film distribution for Nat Geo since July 2011. He was director of distribution for the **Museum of Science and Industry** (MSI) in Chicago from 2002 to 2013, where he distributed ***Antarctica***, ***Mysteries of Egypt***, and ***Solarmax***, among other titles. For part of that time he also worked in film distribution for nWave with Monteleone. From 1993 to 2002 Wickstrom was director of film operations for MSI, managing all aspects of the museum's production, exhibition, and distribution of GS film. He holds a BA in Journalism from the University of Nebraska and an MBA from the University of Kansas.

John Wickstrom

Cosmic's senior distribution coordinator **Melissa Rogers** was film distribution coordinator at Nat Geo from 2015. She studied at Texas A&M University.

Monteleone and Rogers, who have been working in Nat Geo's New York City office, will work from their respective homes in the New York area; Wickstrom will continue working from his home in Overland Park, KS, as he has for many years.

*(from **MEDIA** on page 1)*

content that can be used in a Pulseworks attraction? "Absolutely," was Deshpande's quick response. He added, "it would be great for [the GS producer's] high-tech profile. We have talked to a number of producers." But the challenge for such cross-media collaborations is that VR demands high frame rates — 4K at 60 fps capture at a minimum, but preferably 120 fps — and close-ups. "Long shots have no relevance" in VR, Deshpande explains. He's encouraged that VR camera technology is getting better, as is image-stitching software.

Pulseworks' VR Transporter combines a motion base with VR head-mounted displays.

Pulseworks

Flying theaters

The "flying theater" concept shares many of the characteristics of giant domes and flat screen theaters, and has been gaining in popularity. **Disney** is credited as the first creator of the flying theater, with the 2001 opening of its ***Soarin' Over California*** attraction at **Disney California Adventure** theme park in Anaheim, CA. (The original film was shot and projected on 15/70 film at 48 fps, but the California site was later converted to digital projection.) This version of a ride-film theater combines a seating system that stacks moving seats in gondola configurations (so that guests' legs can dangle) with a film projected onto on a giant vertical dome, enhanced with 4D effects like wind and scents. Disney has since opened *Soarin'* attractions at **EPCOT** in Orlando, FL, and the **Shanghai Disneyland Park** in China, with a new film *Soarin' Around the World*. The *Soarin'* rides were developed by Disney using proprietary technologies that are not available to other venues.

However, Taiwan-based **Brogent Technologies** supplies similar flying-theater systems, branded "i-Ride," and expects to have 20 locations operating around the world by the end of 2018. Like the Soarin' rides, the i-Ride projection screen is a large hemispherical dome perpendicular to the floor, which Brogent emphasizes is key to the sense of immersion.

FlyOver Canada in Vancouver, BC, features technology from Brogent Technologies.

The first i-Ride was *FlyOver Canada* in Vancouver, BC, which opened in 2013 in the building that was formerly the **IMAX Theatre at Canada Place**, the world's first IMAX 3D theater (*see Shorts, Summer 2013*). Typical of most i-Ride attractions, Vancouver's dome is 60 feet (18 meters) in diameter, and uses a single 4K projector running at 60 fps.

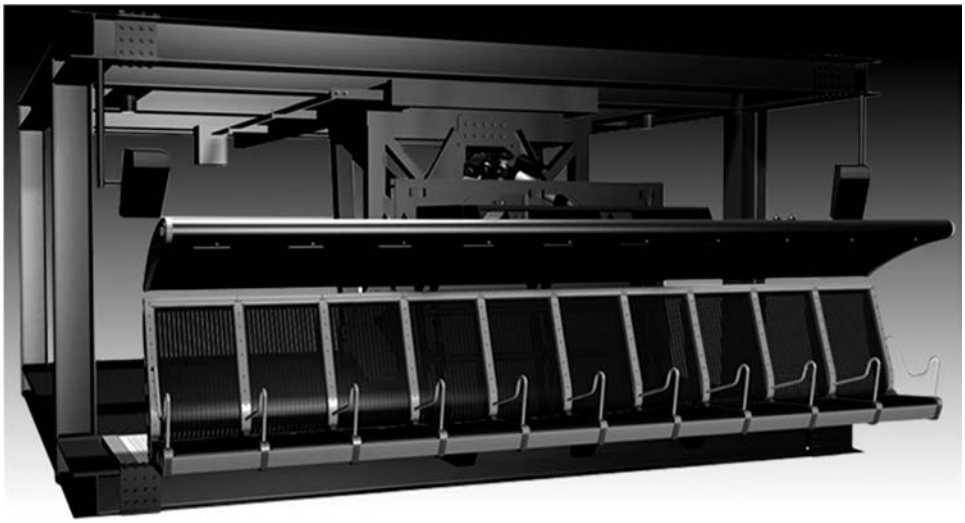
Another former IMAX theater, in Australia's **Dreamworld** theme park, will be converted to a *Fly Over Australia* attraction later this year. The *FlyOver America* attraction at the Mall of America in Minneapolis, MN, opened in 2016.

Each of the 13 current i-Ride venues has its own signature film. The films are about four to five minutes in theme parks like the *Voletarium* i-Ride at Europa-Park in Rust, Germany, and eight minutes long at standalone attractions like Vancouver and Minneapolis. Ticket prices at those two venues range from about US$12 to $22.

Stefan Rothaug, senior marketing specialist for Taiwan-based Brogent, is bullish on the prospects for converting more GS theaters, based on the experience in Vancouver: *FlyOver Canada* reportedly crossed the two-million-visitor threshold part way through its fifth year, and the trend is up, with attendance at 600,000 in 2017, comparable to the peak years' performance of the IMAX 3D theater that operated on the site from 1987 to 2009.

Brogent Technologies

Brogent Technologies



Brogent's i-Ride motion bases hold ten riders and can be stacked.

What do GS theater operators need to know if they want to consider a conversion to a flying theater? The Brogent i-Ride package consists of the ride hardware and control system, special effects, dome screen, and the projection and sound systems. The client is responsible for building improvements to accommodate the system, and for contracting with a producer to make the film. The auditorium footprint has to be at least 66 feet (20 meters) square, with clear interior height of at least 50 feet (15 meters). According to Rothaug, a good budget estimate for the client's total costs is $15–20 million.

There is no precedent for sharing or licensing i-Ride films, because they tend to be destination films specific to the locale. So a GS theater thinking about converting to i-Ride would probably do so with the plan of creating a custom flyover film that would play for years.

Could an educational i-Ride film work? Rothaug believes so. He imagines an educational film that would "fly through a hurricane, or outer space, or under the sea." But re-purposing footage from a film made for a GS documentary to a shorter i-Ride flyover film would pose a "creative challenge." The i-Ride needs the content to be shot from the front view of the helicopter or drone used for filming, whereas a lot of GS aerial shots are captured from side-mounted cameras.

Brogent has also created a more compact and significantly less expensive VR-based, motion-enhanced system, branded "Q- Ride." This turnkey ride system has 12 seats arranged in a triangle around a center core. Acer head-mounted displays (HMDs) and separate headphones are tethered to the system's computer. The VR shows run about five minutes. Total package price, including one VR show, is about $500,000.

Motion seats

Rather than re-configure the auditorium and change the entire projection system, some theater operators may consider replacing just some of the seats with motion-enhanced seats, such as those from Quebec-based **D-BOX Technologies**. The company serves entertainment and industrial markets, but the 640 commercial multiplexes screens in 36 countries with D-BOX seats makes that segment one of its largest.

D-BOX doesn't actually manufacture the seats, it designs and installs the motion platforms and systems that deliver motion and vibrations to compatible seats (including recliners and rockers), synced to the action in the movie. Typically, exhibitors choose to turn only a few rows of seats into D-BOX seats, though entire auditoriums have been converted in some cases.

D-BOX personnel work with the movie's creative team to artistically score an immersive motion track, creating an electronic file that sends instructions to the seats for vibration and motion. The exhibitor pays for the in-theater hardware; the exhibitor, distributor, and D-BOX share the up-charge revenue collected from theater admissions.

Michel Paquette, vice president of corporate affairs, told me that D-BOX would definitely be interested in supplying giant-screen theaters in museums and science centers, and working with GS producers.

The company has recently introduced D

*(see **MEDIA** on page 8)*

Two rows of D-BOX seats in a multiplex theater.

D-BOX Technologies

MediaMation's four-seat motion base.

*(from **MEDIA** on page 7)*

-BOX VR, a product that pairs its enhanced theater chairs with an individual VR experience, for installation in theater lobbies as a separately-ticketed attraction. Their first VR show, from the LA-based **Virtual Reality Company** (VRC), is an animated 12-minute, family-friendly VR show, *Raising a Ruckus*. The main characters are young twins whose dog, Ruckus, "leads them on a rollercoaster journey through a thrilling prehistoric world," according to VRC. D-BOX's Paquette adds, "we suspect this could lead to a series of VR shows" based on the characters in the first installment.

For its first lobby installation of ten D-BOX seats, D-BOX chose Cineplex's **Scotiabank Theatre** in Ottawa because of that multiplex's strong attendance and family demographic. D-BOX has also supplied its immersive motion system to complement *The Martian* and *Goosebumps* VR shows.

Paquette emphasizes that D-BOX doesn't do other 4D effects like wind or scents: "The immersive motion brought by our science and artists is our thing." He believes that "high-definition motion" is the single most impactful special effect. Paquette also says that the seats "can surprisingly reproduce [the sensation of] free-fall," which could enhance GS documentaries or VR content with motion sequences underwater, over land, or in space.

4D experiences

MediaMation is an integrator of 4D EFX theaters located in Torrance, CA. It supplies systems to cinemas and attractions, the latter sector including museum clients such as the **Michigan Science Center** (Mi-Sci) in Detroit. MediaMation provided Mi-Sci with a 4D theater that incorporates multiple effects with static, cinema-grade seats installed in groups of four. The company programmed 4D effects for the 20-minute 3D version of **National Geographic**'s ***Extreme Weather***, which plays in the Toyota Engineering 4D Theater. (Mi-Sci also has a planetarium and an IMAX Dome theater with 15/70 film.)

MediaMation doesn't have its own library or content distribution, so clients license content from outside producers and distributors such as **nWave Pictures**, **Super78**, and **The Juice** (whose library of 4D titles includes content from nWave, **Giant Screen Films**, and several independent fulldome producers).

MediaMation then provides the programming for the effects, the costs of which are included in the content package. Four-D effects can include several from a large menu: air blasts, scents, water spray, leg ticklers, motion seats or seat "rumblers," back pokers, etc. Atmospheric effects can include wind, rain, snow, bubbles, and fog.

MediaMation's VR entry is the REACTIVr, available in a two-seat 4D EFX pod and Motion EFX vehicle. REACTIVr is a VR gaming platform that combines VR with 3-DOF (three degrees of freedom) motion and 4D effects. The typical running time of each VR game is five minutes.

Cross-platform productions

Producers and distributors of GS documentaries, driven by the need to supplement film licensing revenues, are looking for cross-platform opportunities. A few have already begun producing for both GS documentaries and other platforms, such as VR/360 video and 4D attractions.

Headquartered in Brussels, Belgium, with offices in the U.S., nWave Pictures was the first GS producer to create content for GS theaters in museums as well as ridefilm theaters in other venues. **Janine Baker**, nWave's senior vice president for distribution and development, says that their 1997 GS film, ***Thrill Ride: The Science of Fun***, was "the first cross-platform film, as it contained various scenes of rides [e.g. *Devil's Mine Ride*] and one full ride: *Virtual Time Machine*." Baker adds, "This was the vision and strategy from the very beginning, and [has] continued successfully for over twenty years."

nWave's feature films have always had a related 3D and 4D attraction film. Before production begins, nWave looks for stories that work across several platforms. ***Fly Me To the Moon*** (2008) and ***Sammy's Adventures*** (2010) "were made as features, and had a giant-screen version, a 4D attraction version (three for Sammy), and a ride version for *FMTTM*."

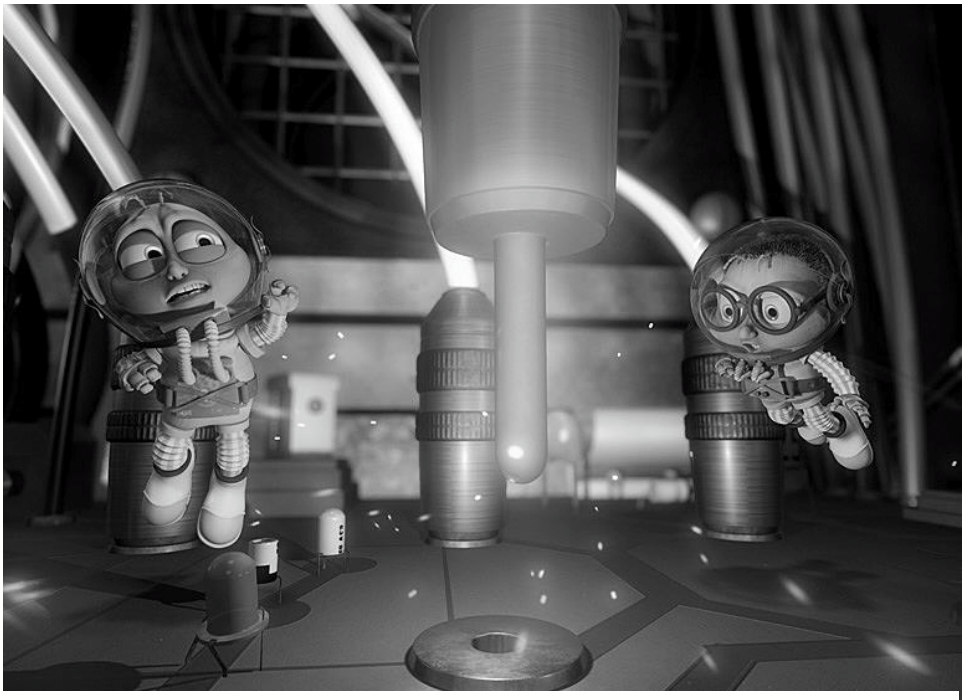
What is nWave's current interest in VR? Baker says that while she appreciates the marketing and PR benefits, she notes

Michigan Science Center's 4D theater with MediaMation seats.

MediaMation

MediaMation

nWave Pictures



nWave's 2008 feature Fly Me to the Moon *was made with a ride version in mind.*

certain challenges of VR: "the headsets, lack of picture quality," and the fact it is "not a shared experience." She believes the "technology should improve... hopefully before audiences lose interest, as they did with the 3D TV."

California's **SimEx-Iwerks** has supplied systems and short-form content for 2D/3D/4D ridefilm and 4D FX theaters for more than three decades. Theater clients include zoos, aquariums, museums, and science centers. In 2013, the company released a 12-minute 4D version of National Geographic's 40-minute GS film, ***Sea Monsters: A Prehistoric Adventure*** (2007), to its 4D theater network. It performed very well, generating a new revenue stream.

More recently, SimEx began distributing short versions of **BBC Earth**'s ***Tiny Giants*** and ***Shark*** to its 4D theaters. **Mike Frueh**, senior vice president for licensing and distribution says, "*Shark 4D* is currently our most popular BBC film."

Several institutional operators of GS screens have SimEx 4D attractions, including the **Museum of Science Boston**, **Moody Gardens** in Galveston, TX, and a few science museums in China. Frueh says that several GS theater operators have contacted him seeking proposals for replacing their theaters with a 4D theater attraction.

Robin Doty, manager of Boston's **Mugar Omni Theater** (a 30-year-old IMAX Dome with 15/70 film), is "very pleased with the 4D theater," for which SimEx supplies the hardware and content. In the more than three years since the 4D theater opened, Doty has enjoyed working closely with SimEx "to tailor title selection" for various audience segments, and having opportunities to "weigh in on the evolution of new topics and treatments." The short running times of the shows (13 to 18 minutes) don't intrude on visits to the exhibit halls. Doty also likes that they add an "extra dose of fun to visitors' time at the museum." He reports that the museum's success with the 4D theater has attracted visits from managers at "numerous other institutional sites... to see what might be possible in their locations."

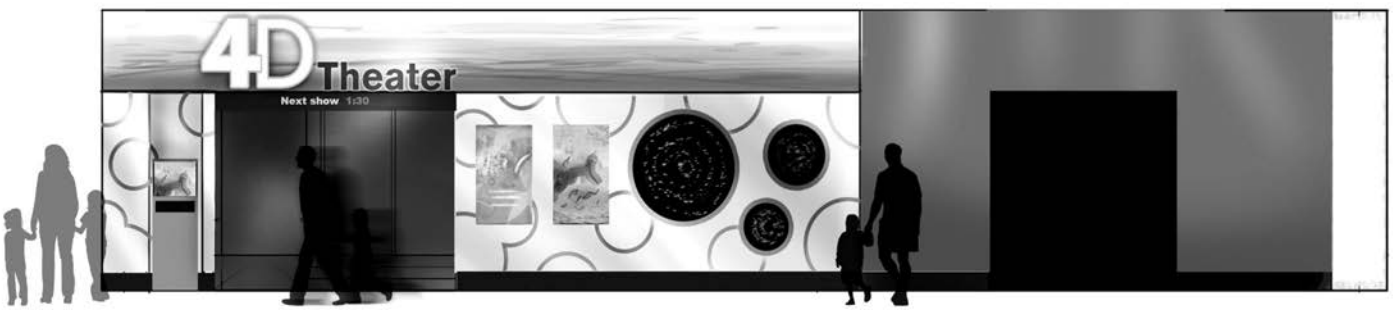
Although SimEx made a foray into VR twenty years ago, for now it is taking a wait-and-see approach and not offering a VR-based attraction.

D3D Cinema introduced a unique VR product to museums last year: the **Birdly** full-body VR flight simulator from **Somniacs**. Birdly has been installed in several institutions, starting with the **Tech Museum of Innovation** in San Jose, CA, followed by the **Houston Museum of Natural History**, and the National Aviary in Pittsburgh.

Michelle Duncan, the Tech's IMAX theater operations director, has been quite pleased with how Birdly has "added to the guest experience" since installing the system in March 2017. She sees no evidence of any cannibalization of her theater revenues, noting that it tends to be a "spontaneous purchase decision" by museum guests, whereas the IMAX Dome theater tends to be a planned or pre-booked experience.

According to an October 2017 press release, D3D is developing a new

*(see **MEDIA** on page 10)*



SimEx

The façade of the Museum of Science Boston's SimEx 4D theater.

Somniacs

Somniacs' Birdly motion base is distributed to museums and science centers by D3D Cinema.

*(from **MEDIA** on page 9)*

"underwater coral reef show (manta ray and sea turtle) with ocean conservation messaging," that will complement ***Oceans: The Blue Planet***, produced by BBC Earth and distributed by D3D's sister company, Giant Screen Films.

Derek Threinen, vice president of film distribution and business development for the two companies, says that "we are in advanced production on a dinosaur experience in conjunction with an upcoming dinosaur-centric GSF film release. The Birdly dinosaur experience comes to the platform this spring, while the film is slated for 2019." This is a good example of a GS film producer and distributor using another platform in a complementary way, earning license revenue from both exhibition types.

Virtual Reality

Philadelphia's **Franklin Institute** one was of the first science museums in the U.S. to integrate VR enhancements with its exhibits, beginning in October 2016. Since then, others have followed its lead, such as the Tech Museum, the **American Museum of Natural History** in New York City, and the **Arizona Science Center** in Phoenix, all of which also have GS theaters.

The Franklin Institute created a VR demo space and two separate VR zones in conjunction with exhibits on outer space and brain, each with ten HMDs. VR is a value-add feature: there is no upcharge for admission. The museum kept costs down by buying off-the-shelf equipment, including Oculus Rift and HTC Vive HMDs, and using content from the SteamVR library. (In fact, the *Blue Whale* VR demo Franklin uses comes with the Vive). In the first 15 months, 150,000 guests have tried VR at the museum.

Susan Poulton, chief digital officer, saw the introduction of VR as something that went beyond enhancing museum exhibits: "It's about technology accessibility." Guest surveys reveal how well they did: of those who have tried the Franklin's VR, 65% did so for the first time, and 33% hadn't even heard of VR before their visit. And she credits their decision to allow kids to participate in the VR attraction as key to its adoption by adults.

Poulton's pursuit of technology accessibility was meant to encourage colleagues, too. "Our goal was to be a catalyst to other museums embracing this." She has helped her peers at other museums overcome their objections to, and in some cases, fear of trying VR, saying that her message to them is, "if you don't do something in VR, it will pass you by."

The Franklin Institute has also added augmented reality (AR) as a companion to its current exhibition on China's Terracotta Warriors. Guests download the app to their smartphones, the phone's camera recognizes the statutes, and graphical info and images become available via "hotspots." For instance, a virtual ancient bronze weapon can be placed into the hands of one of the statues.

The throughput problem

VR hasn't taken off with theme parks because of the throughput problem: for a theme park with 10,000-plus visitors per

The Tech Museum

The Tech Museum of Innovation was one of the first museums to install Birdly.

The Franklin Institute's VR demo space.

day, it is practically and economically impossible to process all those who might want to try VR, especially when most VR experiences are individual, not shared with a large group of people.

On the other hand, VR arcades have begun to proliferate. Some are part of standalone gaming centers, others are being added to multiplex lobbies. So far, most VR content has come from a variety of sources not related to film franchises, but we can increasingly expect more to be tied to tentpole Hollywood releases.

Imax Corporation is an early entrant, with its pilot standalone VR center in Los Angeles and five others now operating in multiplex theaters with IMAX screens in New York, Toronto, Shanghai, and Manchester, UK (s*ee The Biz, January 2018*). Separately from Imax's efforts, **AMC Theatres** has announced plans to build six "Dreamscape Immersive VR centers" in the U.S. and U.K. by 2019; some will be repurposed existing movie theaters, while others will be standalone installations.

But could a VR arcade be added to a museum, perhaps next to the GS theater? The potential tie-in between a new GS film and its VR companion seems intuitively obvious, but we have a chicken-and-egg situation: there isn't enough demand for educational VR content, so planning major hardware installations by museums and prospective vendors and partners isn't happening yet. Without the installed base of VR centers demanding edu-tainment content, VR producers aren't in a rush to create it.

Even though they are mainly in commercial locations, VR centers are acting as incubators, helping introduce the technology and experience to mass audiences even as the adoption of in-home VR has been slow to take hold. As **Igal Nassima**, a programmer and the founder of VR/AR producer **Superbright**, told the *New York Times* recently, "It's due to the commercial failure of the VR headset that you're seeing [VR center operators] use this moment to take the medium to the public. It's like the early days of PCs, where we had internet cafes."

Operators of VR centers with whom I spoke for this article talked about how the venues attract people with varying degrees of familiarity with VR, from the "never-done-it-before" segment to the "light user" to the "heavy gamers" with lots of VR experience under their belts.

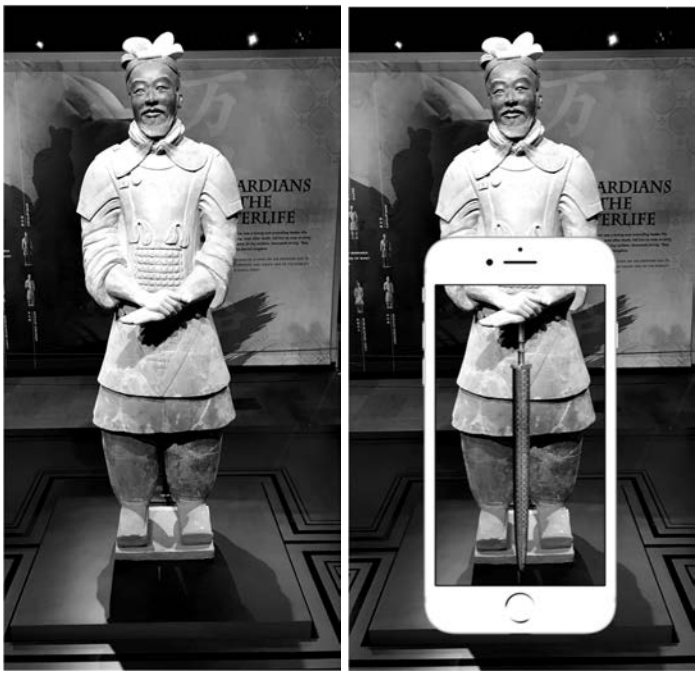
Arcades offer a relatively inexpensive way for the average person to get acquainted with VR, compared to buying all the gear for in-home use. VR centers also offer operators and guests alike the chance to try out different HMDs.

From a content standpoint, operators talk about how guests like competition, so VR multi-player games are emerging as the preferred content type. The addition of light 4D effects (such as wind and seat vibration) **can** help keep VR positioned as an out-of-home experience worth the admission price. While the group size may be small (up to four players at once), multiplayer VR games are fun, social experiences. VR games could translate to small-group educational experiences too, although the throughput pressure of offering them to school groups of 20 or more students might be challenging, to say the least.

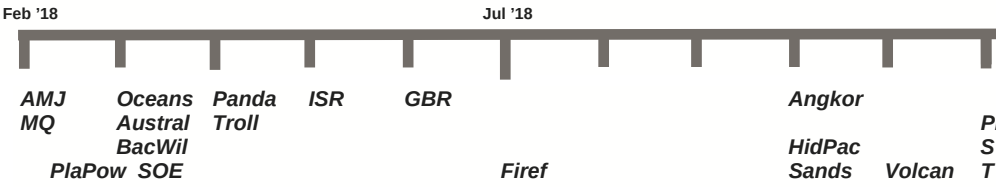
Beyond VR

Holovis is a designer and manufacturer of a range of large-scale display solutions, including VR applications, for the entertainment and enterprise sectors. Producers and integrators of consumer VR experiences have accelerated their learning by creating enterprise VR applications. For instances, Holovis has used VR for previsualizations of retail store fit-outs and layouts.

*(see **MEDIA** on page 14)*



The Franklin Institute used AR to enhance its Terracotta Warrior exhibit.



* New listing.
DMR films are separated from original GS films and listed with fewer details.
All films are 3D unless noted; underlined titles are 2D.
Updated information is printed in **bold**.
Unless noted, all films run about 40 minutes.

Oceans: Our Blue Planet
*BBC Earth, **OceanX Media**; distributors: Giant Screen Films, BBC Earth; directors: Mark Brownlow, Rachel Butler; producers: Neil Nightingale, James Honeyborne; DPs: Ted Giffords, Chris Bryan, Gavin Thurston, Roger Munns, Alexander Vail, Rod Clarke, John Shier, Joe Platko, Daniel Zatz, Hugh Miller, Richard Wollocombe, Alfredo Barrosso, David Reichert; score: Hans Zimmer, Jacob Shea, David Fleming; executive producers: Ray Dalio, Jonathan Williams. Release: March 16.*
Principal photography is complete.

Australia: Life in the Wild *(formerly Ancient Australia)*
Wild Pacific Media, Definition Films; distributor: Madman Entertainment, K2 Communications; director, DP: Nick Robinson; executive producers: John Weiley, David Gross, John Maynard, Mark Kresser. Release: March.
– Principal photography is complete.

Backyard Wilderness
*Archipelago Films, Arise Media; distributor: SK Films; directors, producers, script: Andrew Young, Susan Todd; score: Gil Talmi; DP: Andrew Young; executive producers: Jonathan Barker, Sean B. Carroll, Stephen Apkon. **Release: March 21.***
– Principal photography is complete. Editing has begun.

Planet Power
*N3D Land Films; distributor: nWave Pictures; directors: Pascal Vuong, Ronan Chapalain; producers: Pascal Vuong, Catherine Vuong; DP: Vern Nobles; score: Franck Marchal; executive producer: Eric Dillens. **Narrators: Courtney Lin Jones, Christopher Swindle.** Release: March.*
– January: Recorded narration with Courtney Lin Jones and Christopher Swindle.
– Film is complete.

The Story of Earth
December Media; distributor: December Media Distribution; director: Russell Scott; producers: Tony Wright, Matt Downey; DP: Benjamin Cunningham; script: Russell Scott, Wayne Fimeri; score: Dale Cornelius; executive producers: Tony Wright, Stuart Menzies. Release: March.

Pandas
*Imax Corporation; distributor: Imax Corporation; directors: **David Douglas**, Drew Fellman; **producer: Drew Fellman; DP: David Douglas**. Cast: Ben Kilham. Release: April 6.*

The Trolley
Stephen Low Company; distributor: Stephen Low Company; director, script: Stephen Low; producers: Pietro Serapiglia, Stephen Low; DP: Tristan Breuwer; executive producer: Paul Globus. Narrator: Maurice Dean Wint. 2D. Release: April.

In Saturn's Rings
SV2 Studios; distributor: BIG & Digital; director, producer, writer, executive producer: Stephen van Vuuren. Narrator: LeVar Burton. 2D. Release: May 4, 2018 (flat and dome version); fall 2018 (fulldome).

Great Barrier Reef 3D
December Media; distributor: MacGillivray Freeman Films; directors: Stephen Amezdroz, Richard Fitzpatrick; producers: Stephen Amezdroz, Matt Downey; script: Don Hahn; executive producers: Tony Wright, Stuart Menzies. Release: June 1.
– Late 2017: Filmed underwater and on land around the Great Barrier Reef.
– January: Filming at northern and southern ends of the reef.
– **Principal photography is complete. Post production has begun.**

Big Flight *(formerly Wingsuit Flyers)*
Big Flight Holdings, LLC; distributor: K2 Communications; director: Christopher J. Scott; producers: John Molli,Christopher J. Scott, Aschi Michel, Tom Fore; DP: Robert Hollingworth; script: Christopher J. Scott; executive producers: Rob Sharps, Doug Greenstein, W. Kyle Gore, Daniel Verbic, Tom McCollum. Release: Summer 2018.
– **February: Filming starts in Switzerland with flyers Jon Devore, Roberta Mancino, Mike Swanson.**

Firefighters
Sean Casey Productions; distributor: tba; director, DP: Sean Casey; producer: Jen Casey; script: Mose Richards. Release: Summer.

Lost Empire of Angkor *(formerly Lost Empire of Cambodia)*
Helio Films, Definition Films; distributor: K2 Communications; director, writer: John Weiley; producers: Murray Pope, Dave Gross. Release: October.
– January: Scouting in Cambodia.
– February, March: Principal photography begins.

Hidden Pacific
*Giant Screen Films, Tandem Stills + Motion; distributor: Giant Screen Films, D3D Cinema; director, producer: Ian Shive. **Release: Fall.***
– Principal photography is complete.

Secrets of the Sands: The Emirates Story*
How an ancient people gained mastery over one of the most inhospitable landscapes on the planet.
Atlantic Productions; distributor: Serengeti Entertainment. 2D. Release: Fall.

Volcanoes
Digital Crossing Productions; distributor: SK Films; director, producer, DP: Michael Dalton-Smith; script: Michael Dalton-Smith, Karen Gordon; score: Daniel Sadowski; executive producers: Jonathan Barker, Michael Dalton-Smith. Cast: Carsten Peter. Release: Fall.

Sea of Love 3D (wt)
Achtel Pty. Ltd.; distributor: tba; director, producer, DP: Pawel Achtel; script: Jan Aldenhoven. Release: December.

Touch the Stars
Afterglow Studios; distributor: BIG & Digital; director, producer: Luke Ployhar; script: Scott Pearson. Release: late 2018.
– The film is about 40% complete. Live action shooting will begin in 2018.

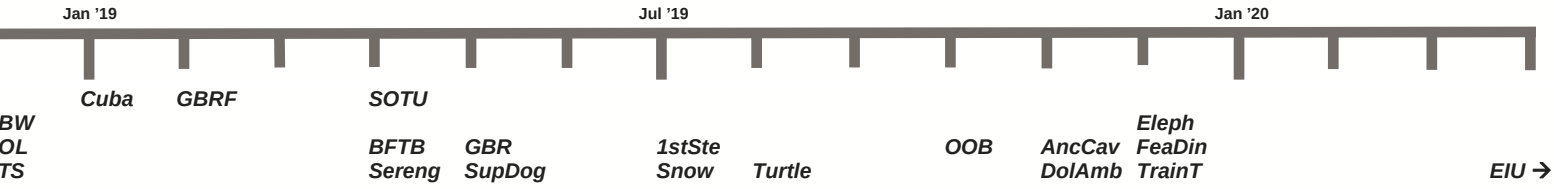
Cuba
*Golden Gate 3D; distributor: Giant Screen Films; director: Peter H. Chang; producers: Peter H. Chang, Violet Angell, Robert Mooring; DPs: Peter H. Chang, Christopher Doyle HKSC, Peter Zuccarini; script: Mose Richards, Robert Mooring; executive producers: Neil Nightingale, Mike Day, Jonathan Rowe, Kelyn Brannon. Cast: Patricia Torres, Eusebio Leal, Daria Siciliano, Fernando Bretos. **Release: January 2019.***

Great Bear Rainforest (wt)
Spirit Bear Entertainment; distributor: MacGillivray Freeman Films; directors, producers, DPs, script: Ian McAllister, Jeff Turner; executive producers: Byron Horner, Kyle Washington. Release: February 2019.
– **Principal photography is complete. Post production has begun.**

Secrets of the Universe
Stephen Low Company; distributor: K2 Communications; director: Stephen Low; producer: Pietro Serapiglia; executive producers: Bob Kresser, Mark Kresser. Narrator: Simon Helberg. Release: April 2019.

Back From the Brink
Sean Casey Productions; distributor: tba; director, DP: Sean Casey; producers: Jen Casey, Sean Casey; script: Mose Richards. Release: Spring 2019.
– **February-March: Filming foxes on the Channel Islands, CA, and Golden eagles in northern California.**
– **Film is fully funded.**

Secrets of the Serengeti *(formerly A Serengeti Story)*
Digital Crossing Productions; distributor: SK Films; director, DP: Michael Dalton-Smith; producers: Michael Dalton-Smith, Jonathan Barker; script:



Michael Dalton-Smith, Wendy MacKeigan; executive producer: Jonathan Barker. Release: Spring 2019.

– February: Filming in Serengeti National Park, Tanzania.

Superpower Dogs (wt)
Cosmic Picture; distributor: Imax Corporation, Cosmic Picture; director: Daniel Ferguson; producers: Taran Davies, George Duffield, Daniel Ferguson, Dominic Cunningham-Reid; DP: Reed Smoot; script: Daniel Ferguson. Release: spring 2019.

– March-April: Will shoot water rescue dog, Reef, in mock water rescues in Italy.
– Later: Search and rescue dogs in Whistler, BC, Canada.

First Steps
Statement Pictures, CNN Films; distributor: tba. 2D. Release: Summer 2019.

Snow
St. Thomas Productions, nWave Studios; distributor: nWave Pictures; directors: Cyril Barbançon, Jacqueline Farmer; producer: Jacqueline Farmer; DPs: Cyril Barbançon, Jacqueline Farmer; script: Philippe Chappuis; score: Franck Marchal; executive producer: Eric Dillens: Release: Summer 2019.

Turtle Odyssey
Definition Films; distributor: SK Films; director, script: John Weiley; producer: David Gross; DPs: Nick Robinson, Caspar Mazzotti, Jon Shaw; executive producer: Jonathan Barker. ***Release: Summer 2019.***

– February: Nesting sea turtles at Raine Island, Australia.

Out of Bounds (wt)
Wild Pacific Media; distributor: K2 Communications; director: Caspar Mazzotti; producers: Nick Robinson, Dave Gross; script: Nick Robinson. Cast: Torah Bright. Release: Fall 2019.

– March-April: Filming begins in British Columbia, Canada.

Ancient Caves (wt)
Oceanic Research Group; distributor: MacGillivray Freeman Film Distribution; director, DP: Jonathan Bird; producers: Jonathan Bird, Art Cohen; script: Jonathan Bird, Art Cohen; score: Bruce Zimmerman; executive producer: Shaun MacGillivray. Cast: Dr. Gina Moseley, Dr. Larry Edwards, Brian Kakuk, Todd Kelly. 15/70 only. 2D. Release: 2019.

– Late 2017, early 2018: filming planned for France, Mexico, Bahamas.

The Dolphin Ambassador (wt)
Milbrand Cinema; distributor: MacGillivray Freeman Films; director, producer, DP: Lance Milbrand; editor: Dave Choice; score: Icarus Music. Cast: Kathleen Dudzinski, Eldon Bolton. Release: 2019.

– February-March: Filming in remote offshore areas along Honduras and the southern Mesoamerican Barrier Reef.

Elephant
Wild Expectations, Ltd.; distributor: tba. Release: 2019.

Feathered Dinosaurs (wt)
Saint Thomas Productions; distributor: K2 Communications. Narrator: James Faulkner. Release: 2019.

Train Time (wt)
Stephen Low Company; distributor: Stephen Low Company; director, script: Stephen Low; producers: Pietro Serapiglia, Stephen Low; executive producer: Paul Globus. 2D. ***Release: 2019.***

Einstein's Incredible Universe (wt)
Cosmic Picture; distributor: tba; director: Daniel Ferguson; producers: Taran Davies, George Duffield, Daniel Ferguson; script: Daniel Ferguson, Mose Richards; DP: Reed Smoot. Release: fall 2020.

DMR FILMS:

Title	Dist	Release
Red Sparrow	FOX	3/2/18
A Wrinkle in Time	WDPD	3/9/18
Tomb Raider	WB	3/16/18/
Pacific Rim: Uprising	UP	3/23/18
Ready Player One	WB	3/29/18
The New Mutants	FOX	4/13/18
Rampage	WB	4/20/18
Avengers: Infinity War	WDPD	5/4/18
Solo: A Star Wars Story	WDPD	5/25/18
Jurassic World: Fallen Kingdom	UP	6/22/18
Alita: Battle Angel	FOX	7/20/18
The Predator	FOX	8/3/18
The Darkest Minds	FOX	9/14/18
X-Men: Dark Phoenix	FOX	11/2/18
Avatar 2	FOX	12/21/18
Gambit	FOX	2/14/19

December Media crew filming a glacier in Iceland for The Story of Earth.

December Media

Imax Corporation

The IMAX VR system and business model are being tested in six pilot locations around the world.

*(from **MEDIA** on page 11)*

The company is now creating immersive spaces that track people as they walk through them. A virtual character could approach you and address you by name. The interface? Your own mobile phone. So far, most of these implementations are in theme parks. Holovis has also created new interactive theaters, although it is seeing a trend to retrofitting existing spaces with such interactive technology. A dome-screen auditorium could be one such optically-tracked space.

How do creators of VR experiences see the tech becoming economically viable for museums and science centers? The holy grail is finding a true group-oriented VR experience. **Amy Steele**, Holovis' vice president for attractions, sees "a big future for group-orientated, multi-device collaboration, encompassing VR." She believes that Holovis' experience with enterprise solutions could be applied to creating a compelling museum-appropriate experience.

For instance, considering science centers' connections to academia and organizations like NASA and JPL, Steele imagines they could acquire "data that would allow a VR content creator to design an authentic Mars-scape. Led by a docent or science educator, school kids could have a walking tour of the surface of Mars, inspiring them to want to learn more when the tour is over."

Holovis sometimes uses a "CAVE" (Cave Automatic Virtual Environment), in which the walls "feature 3D volumetric projection, and users wear head-tracked glasses so that the world around them moves to their true perspective. This lets people work collaboratively, without requiring access to highly sought-after tools or equipment, and with no risk of physical harm to themselves."

While VR could be a "great tool" for certain collaborative experiences or tasks, such as "visualizing large and complex data sets" for manufacturing purposes, Steele suggest that "for applications where maintaining a group experience is important, such as training, using large-format immersive environments like CAVEs are more suited." This could be applied to a school group experience, too.

Integrators like Holovis like to embrace disruptive technologies to create new experiences. Steele says the big one for them — and one that she thinks GS producers and exhibitors should watch for — is the ability to gather and track data on guests as they consume the experience. She believes this will ultimately transfer power from the creators to the consumers of content. Users will increasingly have the ability to control their experience. How important is designing interactivity into content for themed entertainment content creators? Many contacted for this article say it is becoming increasingly significant.

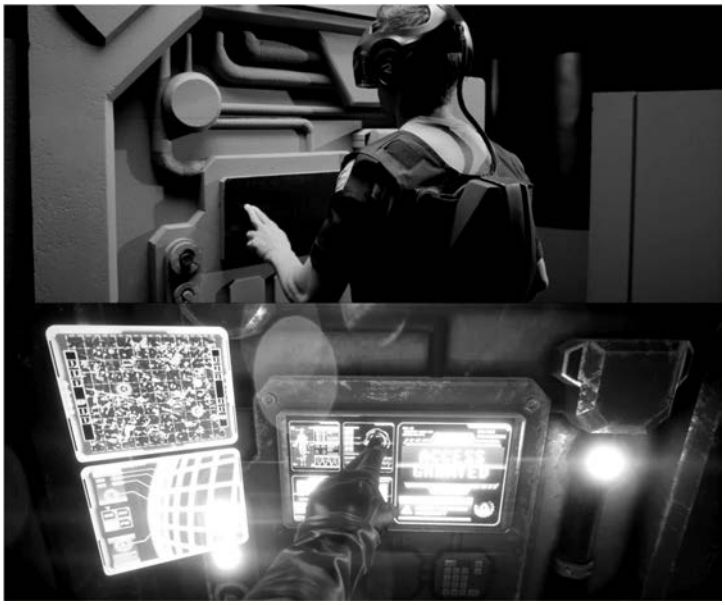
Free-roam VR

VR experiences that allow the user to walk somewhat freely through a space while wearing a head-mounted display have been given the moniker "free-roam VR." Commercial leaders of this concept are **The Void** and **Zero Latency**. As the hardware and labor costs to set up and operate these attractions are coming down, free-roaming VR becomes more accessible to other integrators.

Holovis

Holovis believes CAVEs could have applications in museums.

The VOID



The VOID's free-roam VR experience.

Zero Latency is a fast-growing pioneer of warehouse-scale free-roam VR for "social gaming." Today it has 17 sites on three continents. By 2020 it plans to have 100. Conceived as commercial attractions, so far they are in gaming centers, shopping malls, and resorts like the MGM Grand Hotel and Casino in Las Vegas. The space requirement for a Zero Latency site is about 2,000 square feet (186 square meters), i.e., 45 feet (14 meters) square, with a standard eight-foot (2.5-meter) ceiling height.

Each game can accommodate up to eight players and lasts about 30 minutes, at a price of $50 per person (in a standalone commercial VR center). I asked **Tim Ruse**, Zero Latency's co-founder and CEO, if he could see creating educational versions of VR games for museums. "Absolutely," was his immediate reply. He thinks his platform would be "perfectly suited" to a museum setting. While agreeing that the throughput issue limits the viability of VR attractions at theme parks, he imagines that the flow of guests could be more easily managed in a museum.

Senior museum managers with whom I have discussed this are intrigued, agreeing that not only is throughput a key issue, but that the economic feasibility would need to be studied, looking at what markets will bear as an add-on ticket price, together with the added labor costs.

Ruse expects improvements in technology will enhance the experience for guests and venue operators alike: as the gear gets smaller, there will be less for users to wear, and turnaround times will be shorter.

The consensus among all integrators working in VR is that it must be a uniquely out-of-home experience that consumers could not replicate in their own homes. This means incorporating interactivity, collaboration, and the use of motion. It can also mean adding 4D effects.

VR in museums

There is no shortage of interest in VR among GS theater operators. In the 2017 Theater Programming Survey fielded by my company, **Blaze Cineworks**, almost four in ten programmers of GS theaters said their organizations planned to introduce some form of VR (or AR, or 360 video) in the future, most in the next one to three years.

Whether it's VR or another media-based attraction, the need for continuously improving the guest experience is paramount. As Pulseworks' Deshpande says about what guides his company's developments, "the 'wall of WOW' has to be climbed constantly."

None of this is to say that GS theaters and filmmakers should re-tool for a wholesale replacement of the GS film experience. Not at all. However, experimenting with new media-based experiences and content, inspired by technologies used theme parks, family entertainment centers, or planetariums, is not a bad idea for the GS industry.

After all, would the GS world have developed as it did if one science center in the early 1970s had not challenged the maker of a new large-format projection system to adapt its invention for a dome screen? The manufacturer was **Imax Systems Corporation** and the museum was the **Fleet Science Center** in San Diego, which installed the world's first OMNIMAX system in 1973, also becoming the first museum customer of the young Imax.

Paul Fraser is president of Blaze Cineworks LLC, a consulting and project management firm that serves content and theater clients in all forms of digital cinema. Blaze also helps develop VR companions for giant-screen and fulldome producers. www.BlazeCineworks.com

Zero Latency's free-roam VR system puts all the tech in a wearable package.

Zero Latency

Premiering This Month

Fifty Shades Freed

Produced and distributed by **Universal Pictures**, directed by **James Foley**. Cast: **Dakota Johnson**, **Jamie Dornan**, **Arielle Kebbel**, **Tyler Hoechlin**, **Kim Basinger**, **Dylan Neal**, **Marcia Gay Harden**. DMR. 2D. Release: Feb. 9.

Black Panther

Produced by **Marvel Studios**, distributed by **Walt Disney Pictures**, directed by **Ryan Coogler**. Cast: **Andy Serkis**, **Chadwick Boseman**, **Martin Freeman**, **Forest Whitaker**, **Angela Bassett**, **Lupita Nyong'o**. DMR. 2D. Release: Feb. 16.

America's Musical Journey

Produced and distributed by **MacGillivray Freeman Films**, directed by **Greg MacGillivray**, produced by **Shaun MacGillivray**, scripted by **Stephen Judson**, photographed by **Brad Ohlund**, scored by **Steve Wood**. Executive producer: **Tom Garzilli**. Cast: **Aloe Blacc**, **Gloria Estefan**, **Jon Batiste**, **Willow Osborne**, **Ramsey Lewis**, **Fisk Jubilee Singers**, **Pause Eddie**, **Lil Bit Jackson**, **Lil Buck**, **The Flying Elvi**. Narrated by **Morgan Freeman**. Release: Feb. 17.

"*America's Musical Journey* celebrates the unique diversity of cultures and creative risk-taking that characterize America, as told through the story of its music. The film follows Grammy Award-nominated singer and songwriter Aloe Blacc as he traces the roots of America's music and follows the footsteps of Louis Armstrong through the colorful locales and cultures where America's music was born. Moving through the nation's most iconic cityscapes, from New Orleans and New York City to Chicago, Detroit, Nashville, Miami and beyond, *America's Musical Journey* captures the essence of American creativity and explores a musical heritage shaped by a collision of cultures coming together from all over the world."

America's Musical Journey

Mountain Quest

Produced by **Stranger Than Fiction Films**, distributed by **K2 Communications**, directed by **Jennifer Peedom**, produced by Jennifer Peedom and **Jo-anne McGowan**; scripted by Jennifer Peedom, **Robert Macfarlane**, and **Mose Richards**, photographed by **Renan Ozturk**, scored by **Richard Tognetti**. Narrated by **Willem Dafoe**. Release: February.

"A lone climber, suspended hundreds of feet in the air, struggles to find the next finger hold, defining progress in inches. The dramatic visuals immerse us in a gripping contest of human determination versus the reality of gravity's potent grip. *Mountain Quest* explores the precarious relationship of humanity's quest to scale some of the world's highest places, while also revealing the scientific and technological advances that have enabled us to conquer these peaks, exposing the heartbeat of the human soul.

"A tapestry of jaw-dropping action, combined with rich STEM content. For example, physics of the real world: how climbing is a tug-of-war between friction and gravity, while skiing involves the same battle of forces in reverse. Educational insights about the engineering of climbing gear and skis, and the aeronautical effects of a wingsuit, are seamlessly integrated with dramatic visuals and action. The film is narrated by Willem Dafoe."

MacGillivray Freeman Films

*(from **SHORTS** on page 24)*

Examiner editor James Hyder is a member of both committees.)

DIGSS 2.0 is available for download, free, in the Member Center section at giantscreencinema.com.

Vuongs win award

Catherine and **Pascal Vuong**, of **N3D Land Films**, have been presented with a Visionary Award by SOLAR FUTURE.TODAY for the giant-screen film ***Planet Power***, which documents the flight of Solar Impulse, the first solar-powered plane to fly around the world. The award was presented at a ceremony in Abu Dhabi, UAE, on Jan. 16.

SOLAR FUTURE.TODAY is an organization dedicated to "uniting influencers to shape and lead the world's transition towards the sustainable future, today." Other recipients of the group's 2018 Visionary Award included 2006 Nobel Peace prize winner Muhammad Yunus and U.N. Messenger of Peace **Jane Goodall**.

Freeman narrates MFF film

Oscar-winning actor **Morgan Freeman** has narrated **MacGillivray Freeman Films'** ***America's Musical Journey***, which opens this month (*see page 16*). Freeman won the Academy Award for Best Supporting Actor in 2005 for his performance in *Million Dollar Baby*. He was nominated for three other Oscars, and won a Golden Globe for his role in *Driving Miss Daisy* in 1990.

Freeman's extensive narration credits include dozens of TV shows and films, and three previous GS films: ***Island of Lemurs: Madagascar*** (2014) and ***Born to Be Wild*** (2011), both from **Imax Corporation**, and ***Cosmic Voyage*** (1996), produced by **Blue Mountain Film Associates**.

America's Musical Journey "celebrates the rich cultural diversity of America as seen through the story of its music," according to a press release. It features musicians **Aloe Blacc**, **Gloria Estefan**, and **Jon Batiste**.

Bookings: February 2018 by Film

546 bookings of 90 films in 155 theaters

These listings to not include Hollywood films shown in multiplex IMAX theaters. Those films are listed when they are shown in non-multiplex theaters, and conversely, non-Hollywood giant-screen films showing on multiplex IMAX screens are also listed.

Listings shown in **bold face** below are new or updated listings. The rest are unchanged from the previous month's issue.

The data on the following pages are ***not*** warranted to be comprehensive or accurate in every detail, despite our best efforts to make them so. They have been compiled from theater surveys, distributors, the Web, and other sources.

We will make every effort to improve the thoroughness, and accuracy of these data. If your theater or film is not shown here, please get in touch with us to update our listings.

Where a date is not shown, it means that no date was provided by the source or, in the case of a closing date, that no date has been set, or that the run is indefinite.

The key to film abbreviations is on page 21.

Film	Theater	Open	Close
ACGOTS	Columbus GA NIM	5/26/17	6/17/18
	Corpus Christi Lex	6/17/16	
	Dayton	6/17/16	5/28/18
	Dearborn THF	**5/26/17**	**5/28/18**
	Erie	10/1/17	10/31/18
	Hampton VASC	11/10/17	11/9/18
	Hastings	6/8/17	6/7/18
	Hutchinson	5/29/17	11/30/18
	Jersey City	12/9/17	5/14/18
	Memphis Pink	5/7/16	6/22/18
	Pensacola NAM	5/26/17	6/30/18
	Salt Lake City Clark	**6/15/17**	**6/7/18**
	San Diego MV AMC	11/10/17	11/9/18
	Washington NASM	5/26/17	5/28/18
AIWC	Chandigarh	9/5/14	3/5/18
Alaska	Shijiazhuang HST	1/1/17	1/1/19
AmazAdve	**Beijing 3D CSTM**	**2/6/18**	**2/15/19**
	Boston MOS	4/14/07	6/30/18
	Boston NEA	4/24/17	4/23/18
	Charlotte DP	5/1/17	4/30/18
	Chattanooga TA	5/26/17	5/25/18
	Chicago MSI	5/26/17	5/25/18
	Cleveland	1/9/18	6/30/18
	Columbus COSI	1/10/18	5/23/18
	Copenhagen TBP	**10/12/17**	**3/1/18**
	Daqing STM	**2/16/18**	**2/15/19**
	Edmonton TWS	1/19/18	1/18/19
	Fort Lauderdale	4/28/17	4/27/18
	Gatineau	**12/16/17**	**12/15/18**
	Hastings	2/8/17	8/12/18
	Houston MNS	4/21/17	12/31/18
	Indianapolis Imx	9/8/17	6/7/18
	Los Angeles CSC	10/11/17	10/10/18
	Lubbock SS	6/2/17	5/30/18
	Melbourne MV	9/15/17	9/13/18
	Mexico City Pap	11/17/17	11/16/18
	Milwaukee	10/1/17	6/30/18
	Montreal SC	10/6/17	3/30/18
	Norwalk MA	7/1/17	6/30/18
	Orlando SC	**2/24/18**	**2/23/19**
	Pittsburgh CSC	11/17/17	6/30/18
	Portland OMSI ET	**2/16/18**	**2/15/19**
	Regina	**2/16/18**	**2/15/19**
	Sacramento Imx	9/8/17	3/7/18
	Saint Augustine	4/28/17	4/30/18
	Saint Louis SC	9/22/17	4/21/18
	Salt Lake City Clark	**4/15/17**	**6/8/18**
	San Jose Tech	5/6/17	4/30/18
	Seattle PSC 2	11/10/17	
	Sioux Falls	12/2/17	5/31/18
	Sudbury	10/6/17	10/5/18
	Tallahassee CLC	**4/28/17**	**10/27/18**
	Toronto OSC	10/6/17	9/30/18
	Vancouver TWS	12/22/17	12/21/18
	Victoria DCI	4/14/17	6/30/18
	Virginia Beach AMSC	5/27/17	6/30/18
Amazon	Hartberg	3/25/15	12/31/18
AMJ	**Dearborn THF**	**2/16/18**	**2/15/19**
	Denver MNS	**2/16/18**	**2/15/19**
	Fort Worth	**2/16/18**	**2/15/19**
	Hutchinson	**2/23/18**	**8/22/18**
	Peoria RM	**2/16/18**	**2/15/19**
	San Jose Tech	**2/17/18**	**2/16/19**
	Tallahassee CLC	**2/16/18**	**2/15/19**
AMMM	**Kuwait SCK**	**2/11/18**	**8/11/18**
	London BFI Ode	9/1/17	8/30/18
	Melbourne MV	7/11/16	
	Saint Augustine	8/19/17	8/18/18
Animalop	Pittsburgh CSC	11/17/17	3/31/18
AOTE	**Orlando SC**	**11/1/17**	**10/31/18**
	Phoenix ASC	**12/26/17**	**12/31/18**
	Portland OMSI ET	**1/26/18**	**1/31/19**
AsterME	Athens Eug	3/30/17	9/30/18
	Columbus COSI	6/1/17	5/1/18
	Garden City	5/19/17	6/18/18
Bugs	Calgary TS	9/28/15	9/28/18
	Columbus COSI	9/15/14	6/30/18
	Davenport Put	10/1/12	4/28/18
	Lodz CC	8/24/15	8/24/18
	London SM	10/22/16	7/31/18
	San Diego RHF	7/1/14	6/30/18
	Vancouver TWS	3/11/06	6/30/18
ConqOTS	Denver MNS	9/1/17	8/30/18
	Kurashiki	7/15/17	4/8/18
	Phoenix ASC	11/3/17	3/31/18
	Seattle PSC 1	**2/2/18**	**6/2/18**
	Victoria DCI	8/18/17	2/17/18
CRA	Garden City	11/1/17	12/31/18
	Hartberg	3/25/15	12/31/18
	Toronto OSC	**2/24/18**	**2/23/19**
D-Day	**Columbus GA NIM**	**1/31/18**	**1/31/19**
	Davenport Put	9/10/17	9/10/18
	Dayton	5/26/17	5/25/18
	Dearborn THF	2/27/17	2/28/18
	Des Moines	12/9/16	6/30/18
	Gatineau	9/1/15	3/30/18
	Hague	7/1/17	6/30/18
	Hastings	5/15/15	12/31/18
	Hutchinson	**12/31/17**	**1/31/20**
	Peoria RM	4/2/15	10/31/18
	Portland OMSI ET	11/10/14	3/1/18
	Raleigh	**5/23/14**	**2/1/19**
	Seattle PSC 2	3/29/14	6/30/19
	Sudbury	5/30/16	6/30/18
	Washington NASM	5/23/17	5/22/19
DIA	Harrisburg	1/1/16	12/31/18
DinoAliv	**Davenport Put**	**2/1/15**	**6/30/18**
	Des Moines	9/1/17	8/30/18
	Houston MNS	**7/1/17**	**6/30/19**
	Portland OMSI ET	**1/26/18**	**1/31/19**
	Stockholm	6/1/17	6/1/18
Dolphins	**Fort Worth**	**5/28/16**	**6/30/18**
	Rochester MSC	12/1/17	12/31/18
	Speyer Dome	**6/1/00**	**6/30/18**
DreamBig	Atlanta FMNH	2/17/17	2/16/18
	Austin TSHM	**10/1/17**	**8/31/18**
	Baltimore MSC	**2/17/17**	**6/30/19**
	Baton Rouge LASM	6/30/17	6/29/18
	Birmingham AL	**2/17/17**	**3/22/18**
	Boston MOS	10/6/17	10/5/18
	Bradford	**1/1/18**	**12/31/19**
	Chantilly	2/17/17	2/16/20
	Charlotte DP	8/26/17	9/1/18
	Chattanooga TA	2/17/17	2/16/18
	Chicago MSI	**2/17/17**	**3/15/18**
	Cleveland	3/17/17	2/16/18
	Columbus COSI	2/17/17	2/16/18
	Davenport Put	**2/24/17**	**3/1/18**
	Dayton	5/26/17	5/25/18
	Dearborn THF	2/17/17	2/16/18
	Denver MNS	2/17/17	2/16/18
	Des Moines	2/24/17	2/23/18
	Detroit MSC	2/17/17	2/16/18
	Edmonton TWS	3/25/17	3/24/18
	Fort Lauderdale	**2/17/17**	**2/17/19**
	Fort Worth	**2/17/17**	**6/30/18**
	Galveston	9/2/17	8/25/18
	Garden City	12/1/17	11/30/18
	Grand Rapids Cel	7/15/17	7/14/18
	Hampton VASC	**2/17/17**	**2/17/19**
	Harrisburg	**2/18/17**	**2/18/19**
	Hastings	10/19/17	10/18/18
	Houston MNS	**2/17/17**	**12/31/19**
	Huntsville USSRC	2/17/17	2/16/18
	Hutchinson	2/17/17	2/16/18
	Kansas City Sci	5/26/17	5/25/18
	Kuwait SCK	**6/25/17**	**3/31/18**
	Leon Exp	12/1/17	5/31/18
	London SM	**9/4/17**	**8/31/19**
	Los Angeles CSC	2/17/17	2/11/18
	Louisville KSC	2/17/17	2/16/18
	Lubbock SS	**2/2/18**	**2/1/19**
	Memphis Pink	**2/10/18**	**3/2/19**
	Mexico City Pap	3/15/17	3/14/18
	Milwaukee	7/10/17	7/9/18
	Mobile	9/23/17	9/22/18
	Monterrey Pap	**2/2/18**	**2/1/19**
	Moscow Kin	**9/10/17**	**12/31/18**
	Norwalk MA	**2/17/17**	**6/22/18**
	Orlando SC	2/17/17	8/16/18
	Parker	12/2/17	6/1/18
	Pensacola NAM	3/1/17	6/30/18
	Peoria RM	2/18/17	2/17/18
	Phoenix ASC	2/17/17	2/16/18
	Pittsburgh CSC	11/17/17	12/31/18
	Portland OMSI ET	**2/17/17**	**3/1/18**
	Raleigh	2/17/17	2/16/18
	Regina	2/17/17	2/16/18
	Richmond SMV	**2/18/17**	**3/1/18**
	Saint Augustine	2/17/17	2/16/18
	Saint Louis SC	**2/17/17**	**5/31/18**
	Salt Lake City Clark	**9/1/17**	**2/15/18**
	San Diego RHF	**3/10/17**	**4/1/19**
	San Jose Tech	2/17/17	2/16/18
	Seattle PSC 2	**2/17/17**	**5/4/18**
	Shanghai 3D STM	**9/19/17**	**9/18/18**
	Sioux Falls	6/2/17	6/2/18
	Sudbury	**2/17/17**	**6/30/19**
	Tallahassee CLC	**2/17/17**	**3/1/18**
	Thessaloniki	10/28/17	10/27/18
	Toronto OSC	2/17/17	8/16/18
	Vancouver TWS	**3/4/17**	**3/16/18**
	Victoria DCI	3/17/17	3/16/18
	Washington NASM	2/17/17	2/16/20
DSC	Victoria DCI	2/3/17	3/2/18
Earthflight	**New York AMNH**	**9/15/17**	**3/8/18**
Everest	Hartberg		12/31/18
	Lucerne	**2/1/18**	**2/28/18**
ExtrWeat	Columbus COSI	9/1/17	9/1/18
	Davenport Put	10/15/16	2/14/18
	Denver MNS	1/13/17	
	Detroit MSC	5/22/17	5/21/18
	Edmonton TWS	6/2/17	6/1/18
	Erie	3/1/15	3/14/18
	Kuwait SCK	11/1/17	4/30/18
	Lubbock SS	3/4/17	2/23/18
	Memphis Pink	3/24/17	5/28/18
	Sacramento Imx	2/24/17	
	Sioux Falls	2/1/17	2/3/18
	Tallahassee CLC	5/19/17	5/1/18
FightPil	Chantilly	12/10/04	
	Corpus Christi Lex	5/12/12	
	Dayton	3/1/13	
	Huntsville USSRC	7/1/13	
	McMinnville	3/23/12	
FMTTM	Hague	2/18/17	2/18/18
FON	Columbus COSI	8/1/14	3/30/18
	Davenport Put	5/18/16	5/17/18
	Louisville KSC	6/18/15	7/2/18
FOTB	Apple Valley Imx	6/5/15	5/31/18
	Austin TSHM	10/1/16	12/31/18
	Columbus COSI	9/1/14	6/30/18
	Davenport Put	2/15/13	6/30/18
	Dearborn THF	2/8/17	12/31/18
	Edmonton TWS	12/26/13	6/30/18
	Fort Worth	1/1/18	6/30/18
	Gatineau	10/5/12	6/30/18
	Harrisburg	2/2/14	6/30/18
	Hastings	3/17/13	6/30/18
	Louisville KSC	9/30/12	6/30/18
	Peoria RM	4/1/16	6/30/18
	Phoenix ASC	10/7/16	8/18/18
	Port of Spain	10/6/17	10/5/18
	Portland OMSI ET	1/7/14	6/30/18
	Raleigh	10/19/17	6/30/18
	Richmond SMV	5/1/13	6/30/18
	Sacramento Imx	8/13/13	6/30/18
	Saint Augustine	1/18/13	12/31/18
	Salt Lake City Clark	2/8/13	6/30/18
	San Diego RHF	10/12/12	6/30/18
	Seattle PSC 2		6/30/18
	Tallahassee CLC	1/18/13	6/30/18
	Victoria DCI	4/5/13	6/30/18
G3DNW	Albuquerque NMMNH	3/18/17	3/17/18
	Berlin CS	4/20/14	10/19/18
	Boston NEA	2/15/16	3/31/18
	Davenport Put	10/17/14	10/20/18
	Hastings	2/10/15	6/10/18
	Houston MNS	2/15/14	5/31/18
	Katowice CC	6/18/14	9/19/18
	Krakow CC	6/18/14	9/19/18
	Lodz CC	6/18/14	9/19/18
	Louisville KSC	6/18/15	6/30/18

Film	Theater	Open	Close
	Melbourne MV	4/11/16	4/10/18
	Mobile	**1/18/18**	**5/18/18**
	Moscow Kin	10/6/14	8/31/18
	Orlando SC	**7/5/14**	**1/4/19**
	Philadelphia FI	**9/6/16**	**12/31/18**
	Poznan CC	6/18/14	9/19/18
	Prague CC	5/22/14	9/19/18
	Victoria DCI	9/4/15	6/30/18
	Virginia Beach AMSC	5/28/16	5/29/18
	Warsaw CC	**6/18/14**	**9/19/18**
	Wroclaw CC	**10/4/17**	**9/19/18**
GC	Grand Canyon DCI	11/1/99	12/18
GCA	Harrisburg	11/1/14	6/30/18
	Richmond SMV	**6/1/16**	**7/31/19**
GlobSoun	Charlotte DP	11/1/17	11/1/19
	Des Moines	10/1/16	10/1/18
	Edmonton TWS	10/1/16	10/1/18
	Mobile	10/18/17	10/1/18
	Vancouver TWS	10/1/16	10/1/18
Greece	**Beijing Dome CSTM**	**1/15/18**	**1/14/19**
	Lucknow	**12/1/17**	**11/30/18**
Gruffalo	Saint Augustine	1/1/15	12/31/18
GruffChi	Erie	2/1/18	2/28/18
	Saint Augustine	2/1/15	12/31/18
GWS	Atlantic City	5/25/17	5/31/18
	Boston NEA	5/31/13	4/30/18
	Galveston	**6/28/14**	**5/1/18**
	Gatineau	10/7/16	6/30/18
	Hutchinson	**7/1/17**	**12/31/18**
	Omaha Zoo	6/1/17	5/31/18
	Portland OMSI ET	**1/26/18**	**1/31/19**
	Regina	6/1/17	5/31/18
	Sacramento Imx	**2/20/15**	**6/30/19**
	San Jose Tech	**10/1/17**	**10/31/18**
HCBTD	San Simeon DCI	8/17/96	
HidUniv	Davenport Put	10/1/17	10/31/18
	Glasgow		2/28/18
HOTB	**New Orleans**	**9/15/15**	**12/31/18**
HumanBod	Vancouver TWS	7/1/16	6/30/18
HumpbWha	Albuquerque NMMNH	12/1/17	11/30/18
	Lucerne	10/6/16	4/6/18
	Memphis Pink	**3/7/15**	**5/28/18**
	Milwaukee	**2/1/18**	**1/30/19**
	Nuremberg		**12/31/18**
	Paris Geo	**7/7/15**	**4/8/18**
	Parker	**1/27/18**	**7/27/18**
	Pittsburgh CSC	**6/17/16**	**12/31/18**
	Richmond SMV	**3/14/15**	**7/31/19**
Hurrican	Bradford	9/17/17	4/20/18
	Guayaquil	4/26/17	4/25/18
	Hampton VASC	6/15/17	6/14/18
	Houston MNS	1/8/18	10/31/18
	Indianapolis Imx	**2/9/18**	**2/8/19**
	Los Angeles CSC	10/10/17	4/10/18
	Lucerne	3/16/17	6/15/18
	McMinnville	3/1/17	8/31/18
	Pensacola NAM	3/13/17	3/12/18
	Seattle PSC 2	1/1/18	3/31/18
	Victoria DCI	**2/1/18**	**1/31/19**
IncrPred	Atlanta FMNH	9/30/17	9/30/18
	Cleveland	4/14/17	4/30/18
	Denver MNS	6/1/17	5/31/18
	Edmonton TWS	**10/6/17**	**10/31/18**
	Fort Lauderdale	**9/29/17**	**9/29/18**
	Galveston	**11/1/17**	**5/1/18**
	Houston MNS	9/15/17	9/30/18
	Lehi	9/29/17	9/30/18
	Montreal SC	6/23/17	6/30/18
	Salt Lake City Clark	2/17/17	2/17/18
	San Diego NHM	**9/1/17**	**8/31/18**
	Sioux Falls	12/22/16	6/30/18
Jerusale	Chattanooga TA	3/27/15	3/27/18
	Columbus GA NIM	10/18/13	2/7/18
	Louisville KSC	1/20/14	7/2/18
	McMinnville	9/27/13	2/28/18
	Raleigh	2/21/14	2/28/18
JIAC	Hague	7/4/17	7/4/18
	Saint Paul SMM	**1/1/18**	**3/1/18**
JMCSO	Al Khobar	9/5/16	3/5/18
	Dearborn THF	2/27/17	2/28/18
	Hong Kong SM	9/1/17	2/28/18
	Orlando SC	7/1/17	6/30/18
	Port of Spain	2/7/17	2/7/18
	Portland OMSI ET	3/1/17	2/28/18
	Sudbury	3/11/17	6/30/18
	Valencia Spn	4/1/17	3/31/18
JTM	Edmonton TWS	12/26/13	6/30/18
	Port of Spain	10/6/17	10/5/18
JTS	Athens Eug	11/29/17	12/31/18
	Chattanooga TA	5/26/17	5/31/18
	Hampton VASC	**2/21/15**	**2/20/19**
	Huntsville USSRC	2/13/15	3/21/18
	Hutchinson	2/20/15	7/2/18
	KSC 1	2/27/15	
	Louisville KSC	4/3/15	6/30/18
	Memphis Pink	1/9/16	5/29/18
	Portland OMSI ET	3/20/15	3/21/18
	Raleigh	6/16/17	6/15/18
	Salt Lake City Clark	5/15/15	5/31/18
	San Jose Tech	4/30/16	5/29/18
	Valencia Spn	8/1/17	5/1/18
	Washington NASM	3/6/15	
JTTSP	**Birmingham AL**	**6/1/17**	**4/15/18**
	Copenhagen TBP	**6/15/17**	**6/30/18**
	Louisville KSC	6/30/17	6/29/18
	Monterrey Pap	**6/10/16**	**3/1/18**
	Phoenix ASC	6/16/17	6/15/18
	Saint Louis SC	**1/12/18**	**5/31/18**
	Saint Paul SMM	5/5/17	6/1/18
	Speyer Dome	5/25/17	5/24/18
	Stockholm		**6/30/18**
Kenya	Hutchinson	5/30/15	6/30/19
	Orlando SC	9/1/17	8/31/18
L&C	Baton Rouge LASM	11/3/15	11/2/18
	Columbus GA NIM		2/7/18
LastReef	**Davenport Put**	**7/1/15**	**6/30/18**
	Seattle PSC 2	9/5/17	2/8/18
LITAOA	Hutchinson	5/1/15	6/18
LivingSe	Hartberg	10/1/13	12/31/18
LOF	McMinnville	3/23/12	
MA	**Atlanta FMNH**	**2/9/18**	**2/8/19**
	Chattanooga TA	12/29/17	3/15/18
	Guangzhou GSC	12/1/17	11/30/18
	Hangzhou LCSTM	12/1/17	11/30/18
	Houston MNS	11/20/17	2/12/18
	Shanghai 3D STM	12/1/17	11/30/18
	Tallahassee CLC	7/14/17	7/13/18
	Tokyo TSC	**3/18/17**	**3/17/18**
	Victoria DCI	11/24/17	5/23/18
MOC	Columbus COSI	4/1/17	3/31/18
	Gatineau	**1/10/18**	**1/31/19**
	Jersey City	**11/1/17**	**5/30/18**
	Lubbock SS	**10/1/17**	**10/31/18**
	Peoria RM	6/1/17	5/31/18
	Philadelphia FI	**9/30/17**	**9/30/18**
	Seattle PSC 2	**3/10/17**	**3/31/18**
	Sioux Falls	**1/25/18**	**1/31/19**
	Sudbury	**9/7/17**	**9/30/18**
MOF	Pensacola NAM	11/8/96	
	Saint Paul SMM	**1/1/18**	**3/1/18**
	Speyer Dome	**12/1/97**	**12/31/18**
MOTUW	Columbus COSI	11/19/14	3/30/18
	Gatineau	1/15/16	6/30/18
	Peoria RM	1/17/15	3/30/18
Mummies	**Baton Rouge LASM**	**3/1/17**	**3/31/19**
	Davenport Put	**2/1/15**	**6/30/18**
	Guayaquil	4/23/07	2/28/18
	Kansas City Sci	6/20/17	6/20/18
	Melbourne MV	**9/22/17**	**9/30/18**
	Portland OMSI ET	**1/26/18**	**1/31/19**
	Sacramento Imx	**1/1/17**	**6/30/19**
	Vancouver TWS	**7/1/17**	**6/30/18**
	Victoria DCI	**2/2/18**	**3/8/18**
ND	New Delhi ICC		
Niagara	Niagara Can DCI	7/1/86	
	Niagara NY DCI	5/1/07	
NPA	Alamogordo	3/24/17	3/23/18
	Branson	**3/18/16**	**12/31/18**
	Carnival Vista	**11/4/16**	**5/31/18**
	Chandigarh	**9/5/16**	**6/30/18**
	Chongqing STM	3/9/17	3/8/18
	Cleveland	7/1/17	6/30/18
	Columbus GA NIM	4/1/16	3/31/18
	Daqing STM	**1/1/18**	**12/31/18**
	Edmonton TWS	2/12/16	6/20/18
	Fort Worth	**2/12/16**	**6/30/18**
	Guangzhou GSC	7/27/17	7/26/18
	Hague	**2/16/16**	**12/31/18**
	Hampton VASC	**4/29/16**	**4/29/19**
	Harrisburg	7/1/16	6/30/18
	Keelung NMMST	7/1/17	6/30/18
	Kuwait SCK	**11/1/17**	**4/30/18**
	Lehi	3/24/17	3/2/18
	London BFI Ode	2/12/16	2/11/18
	Lucerne	3/17/16	4/30/18
	Memphis Pink	**3/5/16**	**5/31/18**
	Montreal SC	2/20/17	2/19/18
	Moscow Kin	**9/17/16**	**12/31/18**
	Mumbai NSC	**8/4/17**	**6/30/18**
	Nanjing YSTC	8/25/17	8/24/18
	Nuremberg	**3/10/16**	**6/30/18**
	Orlando SC	2/12/16	11/17/18
	Paris Geo	**4/3/17**	**4/8/18**
	Pittsburgh CSC	**2/12/16**	**12/31/18**
	Portland OMSI ET	**2/12/16**	**6/30/18**
	Raleigh	**2/27/16**	**6/30/18**
	Richmond SMV	4/10/16	4/30/18
	Saint Louis SC	**2/12/16**	**3/31/18**
	San Jose Tech	2/12/16	7/31/18
	Sinsheim	**3/4/16**	**6/30/18**
	Sudbury	2/12/16	6/30/18
	Valencia Spn	10/7/16	9/30/18
	Vancouver TWS	2/12/16	6/30/18
Ocean Oasis	**Tijuana**	**10/15/17**	**3/15/18**
Ozarks	Branson	9/93	12/18
Penguins	Al Khobar	6/21/17	6/20/18
	Bogota Mal	6/17/17	6/16/18
	Milwaukee	10/23/17	6/20/19
PTJH	Cathedral City	5/1/17	4/30/18
Pulse	**Vancouver TWS**	**7/1/17**	**6/30/18**
RAW	**Leon Exp**	**1/12/18**	**2/28/18**
Rescue	McMinnville	6/1/12	
RME	Columbus COSI	7/10/07	6/30/18
	Dearborn THF		9/1/18
	Lucerne		9/1/18
	Quebec Cpx	7/14/17	7/14/18
	Saint Paul SMM	10/13/17	3/1/18
	Seattle PSC 2		9/1/18
	Toronto OSC		9/1/18
	Vancouver TWS		9/1/18
	Victoria DCI		9/1/18
RobotsNG	Guayaquil	4/1/17	3/31/18
	Hampton VASC	6/20/15	6/19/18
	London SM	5/23/15	2/28/18
	Pensacola NAM	4/15/17	
	Philadelphia FI	10/1/16	
	Singapore SC	5/1/17	4/30/18
	Victoria DCI	2/3/17	
ROTB	Saint Augustine	10/3/15	12/31/18
SeaMonst	Davenport Put	4/27/16	4/26/18
SFLIS	**Copenhagen TBP**	**2/9/17**	**3/1/18**
	Dongguan STM	**1/1/18**	**12/31/18**
	Melbourne MV	3/16/17	3/22/18
	Paris Geo	**1/30/18**	**1/29/19**
	Salt Lake City Clark	**2/16/18**	**2/15/19**
	Seattle PSC 2	9/5/17	9/4/18
	Taichung NMNS	7/1/17	6/30/18
	Victoria DCI	9/22/17	9/21/18
SOG	Baton Rouge LASM	1/1/18	12/31/18
SpaceNex	Calgary TS	1/1/17	12/31/18
	Hangzhou LCSTM	7/1/17	6/30/18
	Huntsville USSRC	3/1/16	5/3/18
	Hutchinson	9/8/17	3/31/18
	Lehi	6/30/17	6/30/18
SpacJunk	Davenport Put	5/3/13	8/31/18
	Hutchinson	10/31/14	10/31/18
TA	Branson	7/19/17	7/19/18
	Davenport Put	**7/1/14**	**6/30/18**
	Fort Worth	**3/1/17**	**1/1/19**
	Louisville KSC	**2/1/16**	**6/30/18**
	Portland OMSI ET	**1/26/18**	**1/31/19**
TinyGian	Atlanta FMNH	9/30/17	9/30/18
	Bradford	**9/1/16**	**9/29/18**
	Cleveland	**12/26/17**	**9/30/18**
	Columbus COSI	**10/11/17**	**10/31/18**
	Harrisburg	**2/1/18**	**2/28/19**
	Houston MNS	**1/12/15**	**6/30/18**
	Kuwait SCK	**9/1/17**	**3/1/18**
	Las Palmas	5/30/16	5/30/18
	Louisville KSC	**9/21/17**	**9/30/18**
	Melbourne MV	**9/22/17**	**9/30/18**
	Montreal SC	**9/18/17**	**9/30/18**
	Pittsburgh CSC	**11/15/17**	**11/30/18**
	Poitiers Imax	4/1/16	4/30/19
	Saint Félicien	**5/1/16**	**4/30/18**
	Sioux Falls	**7/1/17**	**6/30/19**
	Sudbury	**6/24/16**	**6/30/18**
	Tallahassee CLC	**1/6/16**	**6/30/18**
TLR	**Louisville KSC**	**2/1/16**	**6/30/18**
	Sacramento Imx	**5/20/16**	**6/30/19**
	Sioux Falls	**7/1/17**	**6/30/19**
TO FLY	**Washington NASM**	**7/1/76**	**12/31/18**
ToFly	Rochester MSC	7/1/16	6/30/18
TOTIA	Atlanta FMNH	6/15/17	6/30/18
	Davenport Put	**2/1/15**	**6/30/18**
	Melbourne MV	**9/22/17**	**9/30/18**
	New Orleans	**7/1/17**	**6/30/19**
	Saint Félicien	**5/1/16**	**4/30/18**
	Vancouver TWS	**7/1/17**	**6/30/18**
TTA	Glasgow	4/1/15	4/30/18
	Hague	10/10/17	4/19/18
	Moscow Kin	**11/1/16**	**12/31/18**
	Prague CC	12/8/17	12/1/18
VanGogh	Tijuana	3/24/17	3/23/18
WATE	Katoomba	6/1/97	
Wild Ocean	**Davenport Put**	**2/1/15**	**6/30/18**
	New Orleans	**7/1/17**	**6/30/19**
WildAfri	**Apple Valley Imx**	**2/1/16**	**6/30/19**
	Austin TSHM	2/2/17	2/28/18
	Davenport Put	8/20/17	9/30/18
	Edmonton TWS	**10/28/16**	**10/31/18**
	Houston MNS	**6/1/16**	**6/30/19**
	Lucerne	9/21/17	9/30/18
	Melbourne MV	**1/4/18**	**1/31/19**
	Memphis Pink	**1/7/17**	**5/25/18**
	Peoria RM	8/10/17	8/30/18
	Portland OMSI ET	**1/26/18**	**1/31/19**
	Richmond SMV	2/1/17	
	Sioux Falls	8/1/17	8/30/18
	Tallahassee CLC	**5/15/16**	**6/30/19**
WM	Kuwait SCK	9/1/17	8/31/18
WOTA	**Vancouver TWS**	**7/1/17**	**6/30/18**
WWDPP3D	Edmonton TWS	5/1/15	5/31/18
	Erie	**9/15/16**	**12/15/19**
	Harrisburg	6/1/17	6/30/18
	Melbourne MV	**9/22/17**	**9/30/18**
	Memphis Pink	5/21/15	5/31/18

Film	Theater	Open	Close
	Milwaukee	**2/1/16**	**6/30/18**
	Orlando SC	4/1/17	3/31/18
	Portland OMSI ET	**1/26/18**	**1/31/19**
	Tallahassee CLC	**4/19/16**	**6/30/18**
	Valencia Spn	7/1/16	7/1/18
	Victoria DCI	5/1/17	4/30/18

February 2018 by Theater

Theater	Film	Open	Close
Al Khobar	JMCSO	9/5/16	3/5/18
	Penguins	6/21/17	6/20/18
Alamogordo	NPA	3/24/17	3/23/18
Albuquerque NMMNH	G3DNW	3/18/17	3/17/18
	HumpbWha	12/1/17	11/30/18
Apple Valley Imx	FOTB	6/5/15	5/31/18
	WildAfri	**2/1/16**	**6/30/19**
Athens Eug	AsterME	3/30/17	9/30/18
	JTS	11/29/17	12/31/18
Atlanta FMNH	DreamBig	2/17/17	2/16/18
	IncrPred	9/30/17	9/30/18
	MA	**2/9/18**	**2/8/19**
	TinyGian	9/30/17	9/30/18
	TOTIA	6/15/17	6/30/18
Atlantic City	GWS	5/25/17	5/31/18
Austin TSHM	**DreamBig**	**10/1/17**	**8/31/18**
	FOTB	10/1/16	12/31/18
	WildAfri	2/2/17	2/28/18
Baltimore MSC	**DreamBig**	**2/17/17**	**6/30/19**
Baton Rouge LASM	DreamBig	6/30/17	6/29/18
	L&C	11/3/15	11/2/18
	Mummies	**3/1/17**	**3/31/19**
	SOG	1/1/18	12/31/18
Beijing 3D CSTM	**AmazAdve**	**2/6/18**	**2/15/19**
Beijing Dome CSTM	**Greece**	**1/15/18**	**1/14/19**
Berlin CS	G3DNW	4/20/14	10/19/18
Birmingham AL	**DreamBig**	**2/17/17**	**3/22/18**
	JTTSP	**6/1/17**	**4/15/18**
Bogota Mal	Penguins	6/17/17	6/16/18
Boston MOS	AmazAdve	4/14/07	6/30/18
	DreamBig	10/6/17	10/5/18
Boston NEA	AmazAdve	4/24/17	4/23/18
	G3DNW	2/15/16	3/31/18
	GWS	5/31/13	4/30/18
Bradford	**DreamBig**	**1/1/18**	**12/31/19**
	Hurrican	9/17/17	4/20/18
	TinyGian	**9/1/16**	**9/29/18**
Branson	**NPA**	**3/18/16**	**12/31/18**
	Ozarks	9/93	12/18
	TA	7/19/17	7/19/18
Calgary TS	Bugs	9/28/15	9/28/18
	SpaceNex	1/1/17	12/31/18
Carnival Vista	**NPA**	**11/4/16**	**5/31/18**
Cathedral City	PTJH	5/1/17	4/30/18
Chandigarh	AIWC	9/5/14	3/5/18
	NPA	**9/5/16**	**6/30/18**
Chantilly	DreamBig	2/17/17	2/16/20
	FightPil	12/10/04	
Charlotte DP	AmazAdve	5/1/17	4/30/18
	DreamBig	8/26/17	9/1/18
	GlobSoun	11/1/17	11/1/19
Chattanooga TA	AmazAdve	5/26/17	5/25/18
	DreamBig	2/17/17	2/16/18
	Jerusale	3/27/15	3/27/18
	JTS	5/26/17	5/31/18
	MA	12/29/17	3/15/18
Chicago MSI	AmazAdve	5/26/17	5/25/18
	DreamBig	**2/17/17**	**3/15/18**
Chongqing STM	NPA	3/9/17	3/8/18
Cleveland	AmazAdve	1/9/18	6/30/18
	DreamBig	3/17/17	2/16/18
	IncrPred	4/14/17	4/30/18
	NPA	7/1/17	6/30/18
	TinyGian	**12/26/17**	**9/30/18**
Columbus COSI	AmazAdve	1/10/18	5/23/18
	AsterME	6/1/17	5/1/18
	Bugs	9/15/14	6/30/18
	DreamBig	2/17/17	2/16/18
	ExtrWeat	9/1/17	9/1/18
	FON	8/1/14	3/30/18
	FOTB	9/1/14	6/30/18
	MOC	4/1/17	3/31/18
	MOTUW	11/19/14	3/30/18
	RME	7/10/07	6/30/18
	TinyGian	**10/11/17**	**10/31/18**
Columbus GA NIM	ACGOTS	5/26/17	6/17/18
	D-Day	**1/31/18**	**1/31/19**
	Jerusale	10/18/13	2/7/18
	L&C		2/7/18
	NPA	4/1/16	3/31/18
Copenhagen TBP	**AmazAdve**	**10/12/17**	**3/1/18**
	JTTSP	**6/15/17**	**6/30/18**
	SFLIS	**2/9/17**	**3/1/18**
Corpus Christi Lex	ACGOTS	6/17/16	
	FightPil	5/12/12	
Daqing STM	**AmazAdve**	**2/16/18**	**2/15/19**
	NPA	**1/1/18**	**12/31/18**
Davenport Put	Bugs	10/1/12	4/28/18
	D-Day	9/10/17	9/10/18
	DinoAliv	**2/1/15**	**6/30/18**
	DreamBig	**2/24/17**	**3/1/18**
	ExtrWeat	10/15/16	2/14/18
	FON	5/18/16	5/17/18
	FOTB	2/15/13	6/30/18
	G3DNW	10/17/14	10/20/18
	HidUniv	10/1/17	10/31/18
	LastReef	**7/1/15**	**6/30/18**
	Mummies	**2/1/15**	**6/30/18**
	SeaMonst	4/27/16	4/26/18
	SpacJunk	5/3/13	8/31/18
	TA	**7/1/14**	**6/30/18**
	TOTIA	**2/1/15**	**6/30/18**
	Wild Ocean	**2/1/15**	**6/30/18**
	WildAfri	8/20/17	9/30/18
Dayton	ACGOTS	6/17/16	5/28/18
	D-Day	5/26/17	5/25/18
	DreamBig	5/26/17	5/25/18
	FightPil	3/1/13	
Dearborn THF	**ACGOTS**	**5/26/17**	**5/28/18**
	AMJ	**2/16/18**	**2/15/19**
	D-Day	2/27/17	2/28/18
	DreamBig	2/17/17	2/16/18
	FOTB	2/8/17	12/31/18
	JMCSO	2/27/17	2/28/18
	RME		9/1/18
Denver MNS	**AMJ**	**2/16/18**	**2/15/19**
	ConqOTS	9/1/17	8/30/18
	DreamBig	2/17/17	2/16/18
	ExtrWeat	1/13/17	
	IncrPred	6/1/17	5/31/18
Des Moines	D-Day	12/9/16	6/30/18
	DinoAliv	9/1/17	8/30/18
	DreamBig	2/24/17	2/23/18
	GlobSoun	10/1/16	10/1/18
Detroit MSC	DreamBig	2/17/17	2/16/18
	ExtrWeat	5/22/17	5/21/18
Dongguan STM	**SFLIS**	**1/1/18**	**12/31/18**
Edmonton TWS	AmazAdve	1/19/18	1/18/19
	DreamBig	3/25/17	3/24/18
	ExtrWeat	6/2/17	6/1/18
	FOTB	12/26/13	6/30/18
	GlobSoun	10/1/16	10/1/18
	IncrPred	**10/6/17**	**10/31/18**
	JTM	12/26/13	6/30/18
	NPA	2/12/16	6/20/18
	WildAfri	**10/28/16**	**10/31/18**
	WWDPP3D	5/1/15	5/31/18
Erie	ACGOTS	10/1/17	10/31/18
	ExtrWeat	3/1/15	3/14/18
	GruffChi	2/1/18	2/28/18
	WWDPP3D	**9/15/16**	**12/15/19**
Fort Lauderdale	AmazAdve	4/28/17	4/27/18
	DreamBig	**2/17/17**	**2/17/19**
	IncrPred	**9/29/17**	**9/29/18**
Fort Worth	**AMJ**	**2/16/18**	**2/15/19**
	Dolphins	**5/28/16**	**6/30/18**
	DreamBig	**2/17/17**	**6/30/18**
	FOTB	1/1/18	6/30/18
	NPA	**2/12/16**	**6/30/18**
	TA	**3/1/17**	**1/1/19**
Galveston	DreamBig	9/2/17	8/25/18
	GWS	**6/28/14**	**5/1/18**
	IncrPred	**11/1/17**	**5/1/18**
Garden City	AsterME	5/19/17	6/18/18
	CRA	11/1/17	12/31/18
	DreamBig	12/1/17	11/30/18
Gatineau	**AmazAdve**	**12/16/17**	**12/15/18**
	D-Day	9/1/15	3/30/18
	FOTB	10/5/12	6/30/18
	GWS	10/7/16	6/30/18
	MOC	**1/10/18**	**1/31/19**
	MOTUW	1/15/16	6/30/18
Glasgow	HidUniv		2/28/18
	TTA	4/1/15	4/30/18
Grand Canyon DCI	GC	11/1/99	12/18
Grand Rapids Cel	DreamBig	7/15/17	7/14/18
Guangzhou GSC	MA	12/1/17	11/30/18
	NPA	7/27/17	7/26/18
Guayaquil	Hurrican	4/26/17	4/25/18
	Mummies	4/23/07	2/28/18
	RobotsNG	4/1/17	3/31/18
Hague	D-Day	7/1/17	6/30/18
	FMTTM	2/18/17	2/18/18
	JIAC	7/4/17	7/4/18
	NPA	**2/16/16**	**12/31/18**
	TTA	10/10/17	4/19/18
Hampton VASC	ACGOTS	11/10/17	11/9/18
	DreamBig	**2/17/17**	**2/17/19**
	Hurrican	6/15/17	6/14/18
	JTS	**2/21/15**	**2/20/19**
	NPA	**4/29/16**	**4/29/19**
	RobotsNG	6/20/15	6/19/18
Hangzhou LCSTM	MA	12/1/17	11/30/18
	SpaceNex	7/1/17	6/30/18
Harrisburg	DIA	1/1/16	12/31/18
	DreamBig	**2/18/17**	**2/18/19**
	FOTB	2/2/14	6/30/18
	GCA	11/1/14	6/30/18
	NPA	7/1/16	6/30/18
	TinyGian	**2/1/18**	**2/28/19**
	WWDPP3D	6/1/17	6/30/18
Hartberg	Amazon	3/25/15	12/31/18
	CRA	3/25/15	12/31/18
	Everest		12/31/18
	LivingSe	10/1/13	12/31/18
Hastings	ACGOTS	6/8/17	6/7/18
	AmazAdve	2/8/17	8/12/18
	D-Day	5/15/15	12/31/18
	DreamBig	10/19/17	10/18/18
	FOTB	3/17/13	6/30/18
	G3DNW	2/10/15	6/10/18
Hong Kong SM	JMCSO	9/1/17	2/28/18
Houston MNS	AmazAdve	4/21/17	12/31/18
	DinoAliv	**7/1/17**	**6/30/19**
	DreamBig	**2/17/17**	**12/31/19**
	G3DNW	2/15/14	5/31/18
	Hurrican	1/8/18	10/31/18
	IncrPred	9/15/17	9/30/18
	MA	11/20/17	2/12/18
	TinyGian	**1/12/15**	**6/30/18**
	WildAfri	**6/1/16**	**6/30/19**
Huntsville USSRC	DreamBig	2/17/17	2/16/18
	FightPil	7/1/13	
	JTS	2/13/15	3/21/18
	SpaceNex	3/1/16	5/3/18
Hutchinson	ACGOTS	5/29/17	11/30/18
	AMJ	**2/23/18**	**8/22/18**
	D-Day	**12/31/17**	**1/31/20**
	DreamBig	2/17/17	2/16/18
	GWS	**7/1/17**	**12/31/18**
	JTS	2/20/15	7/2/18
	Kenya	5/30/15	6/30/19
	LITAOA	5/1/15	6/18
	SpaceNex	9/8/17	3/31/18
	SpacJunk	10/31/14	10/31/18
Indianapolis Imx	AmazAdve	9/8/17	6/7/18
	Hurrican	**2/9/18**	**2/8/19**
Jersey City	ACGOTS	12/9/17	5/14/18
	MOC	**11/1/17**	**5/30/18**
Kansas City Sci	DreamBig	5/26/17	5/25/18
	Mummies	6/20/17	6/20/18
Katoomba	WATE	6/1/97	
Katowice CC	G3DNW	6/18/14	9/19/18
Keelung NMMST	NPA	7/1/17	6/30/18

Theater	Film	Open	Close
Krakow CC	G3DNW	6/18/14	9/19/18
KSC 1	JTS	2/27/15	
Kurashiki	ConqOTS	7/15/17	4/8/18
Kuwait SCK	**AMMM**	**2/11/18**	**8/11/18**
	DreamBig	**6/25/17**	**3/31/18**
	ExtrWeat	11/1/17	4/30/18
	NPA	**11/1/17**	**4/30/18**
	TinyGian	**9/1/17**	**3/1/18**
	WM	9/1/17	8/31/18
Las Palmas	TinyGian	5/30/16	5/30/18
Lehi	IncrPred	9/29/17	9/30/18
	NPA	3/24/17	3/2/18
	SpaceNex	6/30/17	6/30/18
Leon Exp	DreamBig	12/1/17	5/31/18
	RAW	**1/12/18**	**2/28/18**
Lodz CC	Bugs	8/24/15	8/24/18
	G3DNW	6/18/14	9/19/18
London BFI Ode	AMMM	9/1/17	8/30/18
	NPA	2/12/16	2/11/18
London SM	Bugs	10/22/16	7/31/18
	DreamBig	**9/4/17**	**8/31/19**
	RobotsNG	5/23/15	2/28/18
Los Angeles CSC	AmazAdve	10/11/17	10/10/18
	DreamBig	2/17/17	2/11/18
	Hurrican	10/10/17	4/10/18
Louisville KSC	DreamBig	2/17/17	2/16/18
	FON	6/18/15	7/2/18
	FOTB	9/30/12	6/30/18
	G3DNW	6/18/15	6/30/18
	Jerusale	1/20/14	7/2/18
	JTS	4/3/15	6/30/18
	JTTSP	6/30/17	6/29/18
	TA	**2/1/16**	**6/30/18**
	TinyGian	**9/21/17**	**9/30/18**
	TLR	**2/1/16**	**6/30/18**
Lubbock SS	AmazAdve	6/2/17	5/30/18
	DreamBig	**2/2/18**	**2/1/19**
	ExtrWeat	3/4/17	2/23/18
	MOC	**10/1/17**	**10/31/18**
Lucerne	**Everest**	**2/1/18**	**2/28/18**
	HumpbWha	10/6/16	4/6/18
	Hurrican	3/16/17	6/15/18
	NPA	3/17/16	4/30/18
	RME		9/1/18
	WildAfri	9/21/17	9/30/18
Lucknow	**Greece**	**12/1/17**	**11/30/18**
McMinnville	FightPil	3/23/12	
	Hurrican	3/1/17	8/31/18
	Jerusale	9/27/13	2/28/18
	LOF	3/23/12	
	Rescue	6/1/12	
Melbourne MV	AmazAdve	9/15/17	9/13/18
	AMMM	7/11/16	
	G3DNW	4/11/16	4/10/18
	Mummies	**9/22/17**	**9/30/18**
	SFLIS	3/16/17	3/22/18
	TinyGian	**9/22/17**	**9/30/18**
	TOTIA	**9/22/17**	**9/30/18**
	WildAfri	**1/4/18**	**1/31/19**
	WWDPP3D	**9/22/17**	**9/30/18**
Memphis Pink	ACGOTS	5/7/16	6/22/18
	DreamBig	**2/10/18**	**3/2/19**
	ExtrWeat	3/24/17	5/28/18
	HumpbWha	**3/7/15**	**5/28/18**
	JTS	1/9/16	5/29/18
	NPA	**3/5/16**	**5/31/18**
	WildAfri	**1/7/17**	**5/25/18**
	WWDPP3D	5/21/15	5/31/18
Mexico City Pap	AmazAdve	11/17/17	11/16/18
	DreamBig	3/15/17	3/14/18
Milwaukee	AmazAdve	10/1/17	6/30/18
	DreamBig	7/10/17	7/9/18
	HumpbWha	**2/1/18**	**1/30/19**
	Penguins	10/23/17	6/20/19
	WWDPP3D	**2/1/16**	**6/30/18**
Mobile	DreamBig	9/23/17	9/22/18
	G3DNW	**1/18/18**	**5/18/18**
	GlobSoun	10/18/17	10/1/18
Monterrey Pap	**DreamBig**	**2/2/18**	**2/1/19**
	JTTSP	**6/10/16**	**3/1/18**
Montreal SC	AmazAdve	10/6/17	3/30/18
	IncrPred	6/23/17	6/30/18
	NPA	2/20/17	2/19/18
	TinyGian	**9/18/17**	**9/30/18**
Moscow Kin	**DreamBig**	**9/10/17**	**12/31/18**
	G3DNW	10/6/14	8/31/18
	NPA	**9/17/16**	**12/31/18**
	TTA	**11/1/16**	**12/31/18**
Mumbai NSC	**NPA**	**8/4/17**	**6/30/18**
Nanjing YSTC	NPA	8/25/17	8/24/18
New Delhi ICC	ND		
New Orleans	**HOTB**	**9/15/15**	**12/31/18**
	TOTIA	**7/1/17**	**6/30/19**
	Wild Ocean	**7/1/17**	**6/30/19**
New York AMNH	**Earthflight**	**9/15/17**	**3/8/18**
Niagara Can DCI	Niagara	7/1/86	
Niagara NY DCI	Niagara	5/1/07	
Norwalk MA	AmazAdve	7/1/17	6/30/18
	DreamBig	**2/17/17**	**6/22/18**
Nuremberg	**HumpbWha**		**12/31/18**
	NPA	**3/10/16**	**6/30/18**
Omaha Zoo	GWS	6/1/17	5/31/18
Orlando SC	**AmazAdve**	**2/24/18**	**2/23/19**
	AOTE	**11/1/17**	**10/31/18**
	DreamBig	2/17/17	8/16/18
	G3DNW	**7/5/14**	**1/4/19**
	JMCSO	7/1/17	6/30/18
	Kenya	9/1/17	8/31/18
	NPA	2/12/16	11/17/18
	WWDPP3D	4/1/17	3/31/18
Paris Geo	**HumpbWha**	**7/7/15**	**4/8/18**
	NPA	**4/3/17**	**4/8/18**
	SFLIS	**1/30/18**	**1/29/19**
Parker	DreamBig	12/2/17	6/1/18
	HumpbWha	**1/27/18**	**7/27/18**
Pensacola NAM	ACGOTS	5/26/17	6/30/18
	DreamBig	3/1/17	6/30/18
	Hurrican	3/13/17	3/12/18
	MOF	11/8/96	
	RobotsNG	4/15/17	
Peoria RM	**AMJ**	**2/16/18**	**2/15/19**
	D-Day	4/2/15	10/31/18
	DreamBig	2/18/17	2/17/18
	FOTB	4/1/16	6/30/18
	MOC	6/1/17	5/31/18
	MOTUW	1/17/15	3/30/18
	WildAfri	8/10/17	8/30/18
Philadelphia FI	**G3DNW**	**9/6/16**	**12/31/18**
	MOC	**9/30/17**	**9/30/18**
	RobotsNG	10/1/16	
Phoenix ASC	**AOTE**	**12/26/17**	**12/31/18**
	ConqOTS	11/3/17	3/31/18
	DreamBig	2/17/17	2/16/18
	FOTB	10/7/16	8/18/18
	JTTSP	6/16/17	6/15/18
Pittsburgh CSC	AmazAdve	11/17/17	6/30/18
	Animalop	11/17/17	3/31/18
	DreamBig	11/17/17	12/31/18
	HumpbWha	**6/17/16**	**12/31/18**
	NPA	**2/12/16**	**12/31/18**
	TinyGian	**11/15/17**	**11/30/18**
Poitiers Imax	TinyGian	4/1/16	4/30/19
Port of Spain	FOTB	10/6/17	10/5/18
	JMCSO	2/7/17	2/7/18
	JTM	10/6/17	10/5/18
Portland OMSI ET	**AmazAdve**	**2/16/18**	**2/15/19**
	AOTE	**1/26/18**	**1/31/19**
	D-Day	11/10/14	3/1/18
	DinoAliv	**1/26/18**	**1/31/19**
	DreamBig	**2/17/17**	**3/1/18**
	FOTB	1/7/14	6/30/18
	GWS	**1/26/18**	**1/31/19**
	JMCSO	3/1/17	2/28/18
	JTS	3/20/15	3/21/18
	Mummies	**1/26/18**	**1/31/19**
	NPA	**2/12/16**	**6/30/18**
	TA	**1/26/18**	**1/31/19**
	WildAfri	**1/26/18**	**1/31/19**
	WWDPP3D	**1/26/18**	**1/31/19**
Poznan CC	G3DNW	6/18/14	9/19/18
Prague CC	G3DNW	5/22/14	9/19/18
	TTA	12/8/17	12/1/18
Quebec Cpx	RME	7/14/17	7/14/18
Raleigh	**D-Day**	**5/23/14**	**2/1/19**
	DreamBig	2/17/17	2/16/18
	FOTB	10/19/17	6/30/18
	Jerusale	2/21/14	2/28/18
	JTS	6/16/17	6/15/18
	NPA	**2/27/16**	**6/30/18**
Regina	**AmazAdve**	**2/16/18**	**2/15/19**
	DreamBig	2/17/17	2/16/18
	GWS	6/1/17	5/31/18
Richmond SMV	**DreamBig**	**2/18/17**	**3/1/18**
	FOTB	5/1/13	6/30/18
	GCA	**6/1/16**	**7/31/19**
	HumpbWha	**3/14/15**	**7/31/19**
	NPA	4/10/16	4/30/18
	WildAfri	2/1/17	
Rochester MSC	Dolphins	12/1/17	12/31/18
	ToFly	7/1/16	6/30/18
Sacramento Imx	AmazAdve	9/8/17	3/7/18
	ExtrWeat	2/24/17	
	FOTB	8/13/13	6/30/18
	GWS	**2/20/15**	**6/30/19**
	Mummies	**1/1/17**	**6/30/19**
	TLR	**5/20/16**	**6/30/19**
Saint Augustine	AmazAdve	4/28/17	4/30/18
	AMMM	8/19/17	8/18/18
	DreamBig	2/17/17	2/16/18
	FOTB	1/18/13	12/31/18
	Gruffalo	1/1/15	12/31/18
	GruffChi	2/1/15	12/31/18
	ROTB	10/3/15	12/31/18
Saint Félicien	**TinyGian**	**5/1/16**	**4/30/18**
	TOTIA	**5/1/16**	**4/30/18**
Saint Louis SC	AmazAdve	9/22/17	4/21/18
	DreamBig	**2/17/17**	**5/31/18**
	JTTSP	**1/12/18**	**5/31/18**
	NPA	**2/12/16**	**3/31/18**
Saint Paul SMM	**JIAC**	**1/1/18**	**3/1/18**
	JTTSP	5/5/17	6/1/18
	MOF	**1/1/18**	**3/1/18**
	RME	10/13/17	3/1/18
Salt Lake City Clark	**ACGOTS**	**6/15/17**	**6/7/18**
	AmazAdve	**4/15/17**	**6/8/18**
	DreamBig	**9/1/17**	**2/15/18**
	FOTB	2/8/13	6/30/18
	IncrPred	2/17/17	2/17/18
	JTS	5/15/15	5/31/18
	SFLIS	**2/16/18**	**2/15/19**
San Diego MV AMC	ACGOTS	11/10/17	11/9/18
San Diego NHM	**IncrPred**	**9/1/17**	**8/31/18**
San Diego RHF	Bugs	7/1/14	6/30/18
	DreamBig	**3/10/17**	**4/1/19**
	FOTB	10/12/12	6/30/18
San Jose Tech	AmazAdve	5/6/17	4/30/18
	AMJ	**2/17/18**	**2/16/19**
	DreamBig	2/17/17	2/16/18
	GWS	**10/1/17**	**10/31/18**
	JTS	4/30/16	5/29/18
	NPA	2/12/16	7/31/18
San Simeon DCI	HCBTD	8/17/96	
Seattle PSC 1	**ConqOTS**	**2/2/18**	**6/2/18**
Seattle PSC 2	AmazAdve	11/10/17	
	D-Day	3/29/14	6/30/19
	DreamBig	**2/17/17**	**5/4/18**
	FOTB		6/30/18
	Hurrican	1/1/18	3/31/18
	LastReef	9/5/17	2/8/18
	MOC	**3/10/17**	**3/31/18**
	RME		9/1/18
	SFLIS	9/5/17	9/4/18
Shanghai 3D STM	**DreamBig**	**9/19/17**	**9/18/18**
	MA	12/1/17	11/30/18
Shijiazhuang HST	Alaska	1/1/17	1/1/19
Singapore SC	RobotsNG	5/1/17	4/30/18
Sinsheim	**NPA**	**3/4/16**	**6/30/18**
Sioux Falls	AmazAdve	12/2/17	5/31/18
	DreamBig	6/2/17	6/2/18
	ExtrWeat	2/1/17	2/3/18
	IncrPred	12/22/16	6/30/18
	MOC	**1/25/18**	**1/31/19**
	TinyGian	**7/1/17**	**6/30/19**
	TLR	**7/1/17**	**6/30/19**
	WildAfri	8/1/17	8/30/18
Speyer Dome	**Dolphins**	**6/1/00**	**6/30/18**
	JTTSP	5/25/17	5/24/18
	MOF	**12/1/97**	**12/31/18**
Stockholm	DinoAliv	6/1/17	6/1/18
	JTTSP		**6/30/18**
Sudbury	AmazAdve	10/6/17	10/5/18
	D-Day	5/30/16	6/30/18
	DreamBig	**2/17/17**	**6/30/19**
	JMCSO	3/11/17	6/30/18
	MOC	**9/7/17**	**9/30/18**
	NPA	2/12/16	6/30/18
	TinyGian	**6/24/16**	**6/30/18**
Taichung NMNS	SFLIS	7/1/17	6/30/18
Tallahassee CLC	**AmazAdve**	**4/28/17**	**10/27/18**
	AMJ	**2/16/18**	**2/15/19**
	DreamBig	**2/17/17**	**3/1/18**
	ExtrWeat	5/19/17	5/1/18
	FOTB	1/18/13	6/30/18
	MA	7/14/17	7/13/18
	TinyGian	**1/6/16**	**6/30/18**
	WildAfri	**5/15/16**	**6/30/19**
	WWDPP3D	**4/19/16**	**6/30/18**
Thessaloniki	DreamBig	10/28/17	10/27/18
Tijuana	**Ocean Oasis**	**10/15/17**	**3/15/18**
	VanGogh	3/24/17	3/23/18
Tokyo TSC	**MA**	**3/18/17**	**3/17/18**
Toronto OSC	AmazAdve	10/6/17	9/30/18
	CRA	**2/24/18**	**2/23/19**
	DreamBig	2/17/17	8/16/18
	RME		9/1/18
Valencia Spn	JMCSO	4/1/17	3/31/18
	JTS	8/1/17	5/1/18
	NPA	10/7/16	9/30/18
	WWDPP3D	7/1/16	7/1/18
Vancouver TWS	AmazAdve	12/22/17	12/21/18
	Bugs	3/11/06	6/30/18
	DreamBig	**3/4/17**	**3/16/18**
	GlobSoun	10/1/16	10/1/18
	HumanBod	7/1/16	6/30/18
	Mummies	**7/1/17**	**6/30/18**
	NPA	2/12/16	6/30/18
	Pulse	**7/1/17**	**6/30/18**
	RME		9/1/18
	TOTIA	**7/1/17**	**6/30/18**
	WOTA	**7/1/17**	**6/30/18**
Victoria DCI	AmazAdve	4/14/17	6/30/18
	ConqOTS	8/18/17	2/17/18
	DreamBig	3/17/17	3/16/18
	DSC	2/3/17	3/2/18
	FOTB	4/5/13	6/30/18
	G3DNW	9/4/15	6/30/18
	Hurrican	**2/1/18**	**1/31/19**
	MA	11/24/17	5/23/18
	Mummies	**2/2/18**	**3/8/18**
	RME		9/1/18
	RobotsNG	2/3/17	
	SFLIS	9/22/17	9/21/18
	WWDPP3D	5/1/17	4/30/18

Theater	Film	Open	Close
Virginia Beach AMSC	AmazAdve	5/27/17	6/30/18
	G3DNW	5/28/16	5/29/18
Warsaw CC	**G3DNW**	**6/18/14**	**9/19/18**
Washington NASM	ACGOTS	5/26/17	5/28/18
	D-Day	5/23/17	5/22/19
	DreamBig	2/17/17	2/16/20
	JTS	3/6/15	
	TO FLY	**7/1/76**	**12/31/18**
Wroclaw CC	**G3DNW**	**10/4/17**	**9/19/18**

Theater	Film	Open	Close

Theater	Film	Open	Close

Key to Film Abbreviations

Film	Title	Year	Dist	
ACGOTS	Aircraft Carrier: Guardian of the Seas	2016	3D	K2
AIWC	Adventures in Wild California	2000		MFF
Alaska	Alaska: Spirit of the Wild	1997		K2
AmazAdve	Amazon Adventure	2017	3D	SKF
Amazon	Amazon	1997		MFF
AMJ	America's Musical Journey	2018	3D	MFF
AMMM	Amazing Mighty Micro Monsters 3D	2016	3D	SER
Animalop	Animalopolis	2008	3D	K2
AOTE	Antarctica 3D: On the Edge	2014	3D	GSF
AsterME	Asteroid: Mission Extreme	2016	3D	CPD
Bugs	Bugs!	2003	3D	SKF
ConqOTS	Conquest of the Skies	2017	3D	SER
CRA	Coral Reef Adventure	2003		MFF
D-Day	D-Day: Normandy 1944	2014	3D	K2
DIA	Dream is Alive, The	1985		IMAX
DinoAliv	Dinosaurs Alive	2007	3D	GSF
Dolphins	Dolphins	2000		MFF
DreamBig	Dream Big: Engineering Our World	2017	3D	MFF
DSC	Deepsea Challenge 3D	2015	3D	CPD
Everest	Everest	1998		MFF
ExtrWeat	Extreme Weather	2016	3D	CPD
FightPil	Fighter Pilot: Operation Red Flag	2004	3D	K2
FMTTM	Fly Me to the Moon	2008	3D	nWP
FON	Forces of Nature	2004		NGD
FOTB	Flight of the Butterflies	2012	3D	SKF
G3DNW	Galapagos 3D: Nature's Wonderland	2014	3D	nWP
GC	Grand Canyon: The Hidden Secrets	1985		K2
GCA	Grand Canyon Adventure: River at Risk	2008	3D	MFF
GlobSoun	Global Soundscapes	2016	3D	FIC
Greece	Greece: Secrets of the Past	2006		MFF
Gruffalo	Gruffalo, The	2014	3D	B&D
GruffChi	Gruffalo's Child	2015	3D	B&D
GWS	Great White Shark	2013	3D	GSF
HCBTD	Hearst Castle: Building the Dream	1996		K2
HidUniv	Hidden Universe	2013	3D	MFF
HOTB	Hurricane on the Bayou	2006		MFF
HumanBod	Human Body, The	2001		NGD
HumpbWha	Humpback Whales	2015	3D	MFF
Hurrican	Hurricane	2017	3D	nWP
IncrPred	Incredible Predators	2016	3D	GSF
Jerusale	Jerusalem	2013	3D	CPD
JIAC	Journey into Amazing Caves	2001		MFF
JMCSO	Jean-Michel Cousteau's Secret Ocean	2015	3D	3DED
JTM	Journey to Mecca	2009		SKF
JTS	Journey to Space	2015	3D	K2
JTTSP	Journey to the South Pacific	2013	3D	MFF
Kenya	Kenya 3D: Animal Kingdom	2013	3D	3DED
L&C	Lewis & Clark: Great Journey West	2002		CPD
LastReef	Last Reef, The	2012	3D	GSF
LITAOA	Living in the Age of Airplanes	2015		CPD
LivingSe	Living Sea, The	1995		MFF
LOF	Legends of Flight	2010	3D	K2
MA	Museum Alive 3D	2016	3D	SER
MOC	Mysteries of China	2016	3D	GSF
MOF	Magic of Flight, The	1997		MFF
MOTUW	Mysteries of the Unseen World	2013	3D	CPD

Film	Title	Year	Dist	
Mummies	Mummies: Secrets of the Pharaohs	2007		GSF
ND	Neelkanth Darshan	2005		unk
Niagara	Niagara: Miracles, Myths, and Magic	1987		K2
NPA	National Parks Adventure	2016	3D	MFF
Ozarks	Ozarks: Legacy and Legend	1993		IMAX
Penguins	Penguins 3D	2013	3D	nWP
PTJH	Pandas: The Journey Home	2014	3D	CPD
Pulse	Pulse: A Stomp Odyssey	2002		GSF
Rescue	Rescue 3D	2011	3D	K2
RME	Rocky Mountain Express	2011		SLC
RobotsNG	Robots	2015	3D	CPD
ROTB	Room on the Broom	2015	3D	B&D
SeaMonst	Sea Monsters: A Prehistoric Adventure	2007		CPD
SFLIS	Search for Life In Space 3D, The	2016	3D	MFF
SOG	Secrets of Gravity, The	2017	3D	B&D
SpaceNex	Space Next 3D	2015	3D	B&D
SpacJunk	Space Junk	2012	3D	K2
TA	Tornado Alley	2011	3D	GSF
TinyGian	Tiny Giants 3D	2014	3D	GSF
ToFly	To Fly!	1976		MFF
TOTIA	Titans of the Ice Age	2013	3D	GSF
TTA	To the Arctic	2012	3D	IMAX
VanGogh	Van Gogh: Brush with Genius	2009		MFF
WATE	Wild Australia: The Edge	1997		MSI
WildAfri	Wild Africa 3D	2015	3D	GSF
WM	Watermelon Magic	2013	3D	B&D
WOTA	Wonders of the Arctic	2014	3D	GSF
WWDPP3D	Walking With Dinosaurs: Prehistoric Planet 3D	2014	3D	GSF

February 2018 Bookings Count

#	Film	#	Film	#	Film	#	Film
70	DreamBig	7	Bugs	2	GruffChi	1	LivingSe
40	AmazAdve	7	RobotsNG	2	HidUniv	1	LOF
37	NPA	6	TOTIA	2	JIAC	1	ND
24	FOTB	5	ConqOTS	2	JTM	1	Ocean Oasis
21	G3DNW	5	DinoAliv	2	Kenya	1	Ozarks
17	TinyGian	5	FightPil	2	L&C	1	PTJH
15	D-Day	5	GlobSoun	2	LastReef	1	Pulse
14	ACGOTS	5	Jerusale	2	Niagara	1	RAW
14	JTS	5	SpaceNex	2	SpacJunk	1	Rescue
13	WildAfri	5	TA	2	Wild Ocean	1	ROTB
12	ExtrWeat	4	AMMM	1	AIWC	1	SeaMonst
12	IncrPred	4	TTA	1	Alaska	1	SOG
11	Hurrican	3	AOTE	1	Amazon	1	TO FLY
11	WWDPP3D	3	AsterME	1	Animalop	1	ToFly
10	GWS	3	CRA	1	DIA	1	VanGogh
9	HumpbWha	3	Dolphins	1	DSC	1	WATE
9	JTTSP	3	FON	1	Earthflight	1	WM
9	MA	3	MOF	1	FMTTM	1	WOTA
9	MOC	3	MOTUW	1	GC		
9	Mummies	3	Penguins	1	Gruffalo		
9	RME	3	TLR	1	HCBTD		
8	JMCSO	2	Everest	1	HOTB		
8	SFLIS	2	GCA	1	HumanBod		
7	AMJ	2	Greece	1	LITAOA		

Directory of Organizations Mentioned in this Issue of LF Examiner

Distributors' abbreviations are listed in **bold.**

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Fax: +44 20-7681-2357
www.3DEfilms.com

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913 Coles Bay Road
Coles Bay, TAS 7215 AUSTRALIA
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Afterglow Studios
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Minneapolis, MN 55402 USA
www.afterglowstudios.com

Amblin Entertainment
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Universal City, CA 91608 USA
Tel: 818-733-7000
Fax: 818-509-1433

AMC Theatres
11500 Ash St.
Leawood, KS 66211-7804 USA
Tel: 816-221-4000
Fax: 816-480-4617
www.amctheatres.com/

American Museum of Natural History
Central Park West at 79th Street
New York, NY 10024 USA
Tel: 212-769-5000
Fax: 212-769-5233
www.amnh.org/imax

Archipelago Films
1600 Spring Valley Rd
Ossining, NY 10562 USA
Tel: 914-271-2171
www.archipelagofilms.com

Arizona Science Center
600 E. Washington St.
Phoenix, AZ 85004 USA
www.azscience.org

Atlantic Productions
Brook Green House
4 Rowan Road, Hammersmith
London, W6 7DU UK
Tel: +44 20 8735 9300
Fax: +44 20 8735 9333
www.atlanticproductions.co.uk

BBC Earth
Television Centre, 101 Wood Lane
London, W127FA UK
http://bbcearth.com/

BIG & Digital **B&D**
2900 Sunridge Heights Pkwy., #1218
Henderson, NV 89052 USA
Tel: 502-212-1559
http://biganddigital.com/

Bishop Museum
1525 Bernice Street
Honolulu, HI 96817 USA
Tel: 808-848-4102
Fax: 808-848-7897
www.bishop.hawaii.org

Blaze Cineworks LLC
10460 Roosevelt Blvd N., #180
St. Petersburg, FL 33716 USA
Tel: 203-292-5745
Fax: 203-404-4998
http://blazecineworks.com

Boeing Company
PO Box 3707
Seattle, WA 98124 USA
www.boeing.com/

Brogent Technologies
No. 9, Fuxing 4th Road, Qianzhen District
Kaohsiung City, 806 TAIWAN
Tel: +886 7 537 2869
www.brogent.com/en

China Film Group
25 Xin Wai Street
Beijing, 100088 CHINA
Tel: +86 010 6225 4488
Fax: +86-10-6225-1044

CJ CGV Co. Ltd.
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Tel: +82-2-2112-6500
Fax: +82-2-2112-6599
http://www.cgv.co.kr/
www.cgv.co.kr/

Columbia Pictures **COL**
10202 W. Washington Blvd.
Culver City, CA 90232 USA
www.sonypictures.com/

Cosmic Picture
6000 3E Avenue
Montreal, QC H1Y 2X3 CANADA
Tel: 514-279-0046

Cosmic Picture Distribution **CPD**
15 Lee Road
Somers, NY 10589 USA

D3D Cinema
990 Grove St., Suite 200
Evanston, IL 60201 USA
Tel: 847-475-9140
Fax: 847-475-9145
www.d3dcinema.com/

D-Box Technologies, Inc.
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Longueuil, QC J4G 1R7 CANADA
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Fax: 450-442-3230
www.d-box.com

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Fax: +61-3-9699-8611
www.decembermedia.com.au

December Media Distribution
476 Bourke Street
Surry Hills, NSW 2010 AUSTRALIA
www.decembermedia.com.au

Definition Films
Building #125 The Entertainment Quarter
115 Lang Road
Sydney, AUSTRALIA
www.definitionfilms.com.au/

Denver Museum of Nature and Science
2001 Colorado Boulevard
Denver, CO 80205-5732 USA
Tel: 303-322-7009
Fax: 303-370-6044
www.dmns.org/

Digital Crossing Productions
14 Jerome Street
Toronto, ON M6P 1H7 CANADA
http://digitalcrossing.ca/

Evans & Sutherland
770 Komas Drive
Salt Lake City, UT 84108-1229 USA
Tel: 801-588-1000
Fax: 801-588-4500
www.es.com

Fleet Science Center
1875 El Prado
PO Box 33303
San Diego, CA 92101 USA
Tel: 619-238-1233
Fax: 619-685-5771
www.rhfleet.org

Foxfire Interactive Corporation **FIC**
500 East Washington St, Suite 30
North Attleboro, MA 02760 USA
Tel: 508-699-6650
Fax: 508-699-6651
www.foxfireinteractive.com

Franklin Institute Science Museum
222 North 20th Street
Philadelphia, PA 19103-1115 USA
Tel: 215-448-1200
Fax: 215-448-1332
www.fi.edu

GDC Technology of America
1016 West Magnolia Boulevard
Burbank, CA 91506 USA
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Fax: 877 643 2872
www.gdc-tech.com

Giant Screen Cinema Association
624 Holly Springs Road Suite 243
Holly Springs, NC 27540 USA
Tel: 919-346-1123
www.giantscreencinema.com

Giant Screen Consulting
11590 SE 60th Avenue
Milwaukee, OR 97222 USA
Tel: 503-577-2608
www.giantscreenconsulting.com

Giant Screen Films **GSF**
990 Grove St., Suite 200
Evanston, IL 60201 USA
Tel: 847-475-9140
Fax: 847-475-9145
www.gsfilms.com

Golden Gate 3D
300 California Avenue
Building Two, Treasure Island
San Francisco, CA 94130 USA
Tel: 415-779-4433
http://gg3d.com/

Grand Schema
New York, NY USA

Grizzly Creek Films
212 S. Wallace Ave. Suite 301
Bozeman, MT 59715 USA
Tel: 406.219.0045
www.grizzlycreekfilms.com

Helio Projects Asia
270 Devonshire Street
Level 2
Surrey Hills, NSW 2010 AUSTRALIA
Tel: +61-2-9318-191
Fax: +61-2-9318-20

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3701 10th Street
Omaha, NE 68107 USA
Tel: 402-733-8401
Fax: 402-733-4415
www.omahazoo.com

Holovis International, Ltd.
7380 W. Sand Lake Rd. Suite 500
Orlando, FL 32819 USA
Tel: 407-536-7600
www.holovis.com/

Houston Museum of Natural Science
5555 Hermann Park Drive
Houston, TX 77030-1799 USA
Tel: 713-639-4600
Fax: 713-523-4125
www.hmns.org

Imax Corporation **IMAX**
2525 Speakman Drive
Mississauga, ON L5K 1B1 CANADA
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Fax: 905-403-6450
www.imax.com

International Association of Amusement Parks and Attractions
1448 Duke Street
Alexandria, VA 22314 USA
Tel: 703-836-4800
Fax: 703-836-4801
www.iaapa.org

K2 Communications **K2**
880 Apollo Street, Suite 239
El Segundo, CA 90245 USA
Tel: 310-524-9100
Fax: 310-524-1540
www.k2communications.com/

Laser Fantasy
Bellevue, WA USA
Tel: 425-214-0777
www.laserfantasy.com

Liberty Science Center
222 Jersey City Blvd.
Jersey City, NJ 07305 USA
Tel: 201-451-0006
Fax: 201-451-6383
www.lsc.org

Lightstorm Entertainment
919 Santa Monica Boulevard
Santa Monica, CA 90401 USA
Tel: 310-656-6100

Lionsgate
2700 Colorado Ave., Suite 200
Santa Monica, CA 90404 USA
Tel: 310-255-3700
Fax: 310-255-3870
www.lionsgate.com

LucasFilm Ltd.
PO Box 2009
San Rafael, CA 94912 USA
Tel: 415-662-1800
Fax: 415-662-2437
www.lucasfilm.com

MacGillivray Freeman Films, Inc. **MFF**
PO Box 205
Laguna Beach, CA 92652 USA
Tel: 949-494-1055
Fax: 949-494-2079
www.macfreefilms.com

Maritime Aquarium at Norwalk
10 North Water Street
Norwalk, CT 06854 USA
Tel: 203-852-0700
Fax: 203-838-5416
www.maritimeaquarium.org

Marvel Studios
1600 Rosecrans Ave
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Tel: 310-550-3100
www.marvel.com/

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2213 Border Ave
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245 N Beverly Dr
Beverly Hills, CA 90210 USA
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www.mgm.com/

Michigan Science Center
5020 John R Street
Detroit, MI 48202 USA
Tel: 313-577-8400
Fax: 313-832-1623
www.mi-sci.org/

Microsoft Corporation
1 Microsoft Way
Redmond, WA 98052 USA
Tel: 425-882-8080
www.microsoft.com/

Milbrand Cinema
24780 Highland Way
Los Gatos, CA 92033 USA
www.milbrandcinema.com

Moody Gardens
1 Hope Blvd.
Galveston, TX 77554 USA
Tel: 409-744-4673
www.moodygardens.com

Museum of Science
1 Science Park
Boston, MA 02114 USA
Tel: 617-589-0266
Fax: 617-589-0454
www.mos.org/

Museum of Science and Industry
5700 S. Lake Shore Drive
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Sevres, 92310 FRANCE
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www.n3dland.com/

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Washington, DC 20560 USA
Tel: 202-357-1675
Fax: 202-357-1652
www.nasm.si.edu/

National Geographic Cinema Ventures
485 Lexington Avenue, 3rd Floor
New York, NY 10017 USA
Tel: 212-656-0724
Fax: 212-656-0701
http://movies.nationalgeographic.com/movies/

National Museum of the U.S. Air Force
Wright-Patterson Air Force Base
PO Box 33624
Dayton, OH 45433 USA
Tel: 937-258-1218
Fax: 937-258-3816
www.airforcemuseum.com

National Science Foundation
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www.nsf.gov

nWave Pictures
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www.oceanicresearch.org

Ouragan Films
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www.ouragan-lefilm.com

Pacific Science Center
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Fax: 206-443-3631
www.pacsci.org

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www.paramount.com

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Atlanta, GA 30082 USA
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www.pulseworks.com

QSC Audio Products, LLC
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Costa Mesa, CA 92626 USA

Ring of Fire Films, Inc.
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www.globalnetproductions.com/

Saint Louis Science Center
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Fax: 314-289-4420
www.slsc.org

Sean Casey Productions
Los Angeles, CA USA

Serengeti Entertainment **SER**
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London, SW7 4UB UK
http://serengetientertainment.com

SK Films, Inc. **SKF**
Pinewood Toronto Studios
225 Commissioners Street, Suite 303
Toronto, ON M4M 0A1 CANADA
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Fax: 647-837-3350
www.skfilms.ca

Sony Pictures Entertainment **SPE**
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Tel: 310-244-4000

Spirit Bear Entertainment
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Statement Pictures, LLC
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www.statementpictures.com

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www.stephenlow.com

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Fax: 514-633-6035
www.stephenlow.com

Stranger Than Fiction Films
Building #125, Trackdown @ The Entertainment Quarter
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Moore Park, NSW 2021 AUSTRALIA
www.strangerthanfictionfilms.com.auwww.strangerthanfictionfilms.com.au

Strong/MDI Inc.
1440 Raoul Charrette
Joliette, QC J6E 8S7 CANADA
Tel: 450-755-3795
Fax: 450-755-3122
http://screen.ballantynestrong.com/

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Los Angeles, CA 90039-2074 USA
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www.super78.com

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www.sv2studios.com/

Tandem Stills + Motion
, USA
Tel: 310-597-5200
https://tandemstock.com

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201 South Market Street
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Tel: 408-294-8324
Fax: 408-279-7167
www.thetech.org

The VOID
234 W. 42nd Street
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https://thevoid.com

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www.foxmovies.com

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www.universalstudios.com

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Burbank, CA 91521 USA
Tel: 818-560-2039

Walt Disney Studios Motion Pictures **WDPD**
350 S. Buena Vista Street
Burbank, CA 91521-1232 USA
Tel: 818-560-6200
www.disney.go.com

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Burbank, CA 91522 USA
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https://www.warnerbros.com/

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Marblehead, MA 01945 USA
Tel: 781-639-0722
Fax: 781-639-2491
www.whiteoakassoc.com

Wild Expectations, Ltd
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Truro, Cornwall TR1 2DP UK
Tel: +44-1736-796978
www.deeblestone.com

Wild Pacific Media
Fox Studios, Building 103, Unit 5
Moore Park, NSW 2021 AUSTRALIA
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www.wildpacificmedia.com/

Zero Latency
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North Melbourne, VIC 3051 AUSTRALIA
https://zerolatencyvr.com

Classified Ads

NOTICE

Jim Sheridan, who advertised in the September and October 2017 issues of LF Examiner, has not paid his bill for those ads.

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SHORTS

Jersey City gets Digistar 6

The former IMAX Dome Theater at the **Liberty Science Center** in Jersey City, NJ, has been transformed into the **Jennifer Chalsty Planetarium** with the removal of the 25-year-old IMAX GT 15/70 film projector and the installation of an **Evans & Sutherland** Digistar 6 Tru8K fulldome system. The change makes the 88.6-foot (27 meter) dome the largest planetarium outside China and Japan, and one of the five largest in the world.

The projection system features ten **Christie** Boxer 4K projectors, each with an output of 30,000 lumens, that together project more than 88 million pixels. The projectors are automatically aligned and blended, providing a seamless image that the company says "surpasses the quality of 15/70 film."

D3D Cinema served as integrator for the sound system and an insert projector, installing a QSC 5.1-channel sound system, and a DCI-compliant Christie 4K projector to show standard films on the front of the dome.

The dome screen was re-skinned with new **Spitz** NanoSeam panels, and new seats, carpets, and a Chromacove lighting system were installed during the five-month renovation that began on July 31, at a cost of $5 million. With the removal of the "doghouse" for the 15/70 film projector, it was possible to increase the seat count slightly to 400.

According to planetarium director **Mike Shanahan** (formerly with the **Bishop Museum** in Hawaii), the space under the seating deck that was previously the IMAX booth will become the Weston Family Lab for Earth and Space Exploration, "a state-of-the-art laboratory classroom [that] will serve as a dramatic entrance to the planetarium." It will feature "Science on a Sphere," a six-foot suspended electronic globe that can display weather and other data on the surface of the Earth in real time.

Speaking of the new Digistar 6, Shanahan says, "the system allows us to do live programming in the dome with a single presenter both giving the program and running the system. We are getting up to speed on doing programming [using] iPad control for those live programs. We are currently offering a mix of the all-live program *Wonders of the Night Sky*; the full-dome program *To Worlds Beyond*, augmented by a 12-minute live section; the Sesame Street-themed show *One World One Sky; Laser Winterfest*, produced by our in-house laser programmer Bill McClain; and one non-astronomy giant-screen film," **Stephen Low**'s *Aircraft Carrier: Guardian of the Seas*.

Amazon Adventure wins award

SK Films' *Amazon Adventure* has won the award for Best 3D Documentary at the **Lumiere Awards** ceremony, presented by the **Advanced Imaging Society** and held on Feb. 12 in Los Angeles. Executive producer **Jonathan Barker** accepted the award on behalf of the film's production team.

SK Films' Jonathan Barker.

According to the AIS Web site, "The Lumiere Awards recognize outstanding international achievement in the creation of immersive storytelling using advanced visual technologies like Virtual Reality, Augmented Reality, High Dynamic Range, Stereo 3D, 360 Video, High Frame Rate, Artificial Intelligence, Real-Time Rendering and more."

Amazon Adventure won five awards at the **Giant Screen Cinema Association**'s 2017 fall conference in Chicago.

DIGSS 2.0 released

The **Giant Screen Cinema Association** has released version 2.0 of its **Digital Immersive Giant Screen Cinema Association Screen Specifications**, guidelines for GS theaters planning to convert from film to digital projection. The specifications, embodied in a five-page text document and a data table, outline the minimum technical requirements for projection and sound systems to meet the expectations of industry experts and the public for high-quality giant screen experiences. They also provide aspirational goals, some of which are feasible now, that would help keep giant screens at the forefront of compelling, immersive theatrical experiences, and further differentiate them from conventional cinemas.

This latest version significantly simplifies the structures of the narrative section and the table of specifications compared to earlier versions. DIGSS 2.0 also recognizes two new technologies that have dramatically enhanced digital image quality: high frame rate (HFR), which increases the number of discrete images captured and presented beyond the standard 24 frames per second that has been the standard in cinema for nearly a century; and high dynamic range (HDR), which expands the range between the darkest blacks and the brightest whites that a projection system is capable of presenting.

DIGSS 2.0 is the formal third revision of a document that emerged from a three-day meeting organized by the **White Oak Institute** in Marblehead, MA, in June 2010. That meeting brought together a panel of 21 advisors, technical experts, and others involved in the giant-screen industry, plus 61 others who contributed via an online wiki site that was opened after the meeting. The original meeting was supported by a grant from the **National Science Foundation**.

The subsequent revisions were promulgated by a subcommittee of the GSCA's Technical Committee. (*Full disclosure: LF*

*(see **SHORTS** on page 16)*

S Films